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Phytoseiid mites (Acari: Phytoseiidae) from Egypt, with new records, descriptions of new species, and a key to species

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Abstract

The present paper refers to the identification of phytoseiid specimens newly collected by the first author of this paper and her collaborators, as well as to the examination of type specimens of species previously described from Egypt. The taxonomy of phytoseiid mites has been studied in Egypt since 1967. Until now, 78 nominal species have been recorded, of which 60 are valid. One of those species, *Phytoseius plumifer* (Canestrini & Fanzago), appears to be based on an incorrect record. An additional species (*Typhlodromus hellei* Hassan, Afifi & Nawar), described from Egypt, is not sufficiently characterised to allow its correct generic classification and the determination of its validity. Eight new records are reported in this paper, including two new species, *Proprioseiopsis ismailiaensis* n. sp. and *Typhlodromus (Anthoseius) fayoumensis* n. sp., which are described. Complementary descriptions of 11 known species are given. An updated survey of all species reported from Egypt and a taxonomic key to separate them are also presented. Six new synonymies are proposed.

Key words: Phytoseiidae, taxonomy, biological control, predator

Introduction

Phytoseiid mites are predators of phytophagous mites and small insects (such as thrips and whiteflies) of various crops worldwide (Gerson *et al.*, 2003; McMurtry *et al.*, 2013). The literature concerning the phytoseiids is very extensive (Prasad, 2012; Demite *et al.*, 2014). The first report of phytoseiids from Egypt was published by El-Badry (1967a). Subsequent papers about their taxonomy and distribution in the country were published by El-Badry (1968a, 1968b), Shehata & Zaher (1969), Zaher & Shehata (1969, 1970), El-Badry (1970), Yousef (1974,

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References

- Abbasova, E.D. (1970) Little known and new species of the predacious mites (Phytoseiidae) of the fauna of Azerbaijan. *Zoologicheskii Zhurnal*, 49, 45–55.
- Abbasova, E.D. (1972) Phytoseiid mites (Parasitiformes: Phytoseiidae) of Azerbaijan. *Avtoreferat Dissertatsii na Soiskanie Uchenoy Stepeni Kandidata Biologicheskikh Nauk. Akademiya Nauk Azerbaydzhanskoy SSR, Institut Zoologii*, Baku, Azerbaijan, 34 pp.
- Abbasova, E.D. (1980) The genus *Typhlodromus* (Parasitiformes: Phytoseiidae) in Azerbaijan. *Zoologicheskii Zhurnal*, 59, 830–837.
- Abou-Awad, B.A. & El-Banhawy, E.M. (1986) Biological studies of *Amblyseius olivi*, a new predator of eriophyid mites infesting olive trees in Egypt [Acari: Phytoseiidae]. *Entomophaga*, 31, 99–103.
<http://dx.doi.org/10.1007/bf02390924>
- Abou-Awad, B.A., El-Sherif, A.A., Hassan, M.F. & Abou-Elela, M.M. (1998a) Life history and life table of *Amblyseius badryi*, as a specific predator of eriophyid grass mites (Acari: Phytoseiidae: Eriophyidae). *Journal of Plant Diseases and Protection*, 105, 422–428.
- Abou-Awad, B.A., El-Sherif, A.A., Hassan, M.F. & Abou-Elela, M.M. (1998b) Laboratory studies on development, longevity, fecundity and predation of *Cydnoseius negevi* (Swerski & Amitai) (Acari: Phytoseiidae) with two mite species as prey. *Journal of Plant Diseases and Protection*, 105, 429–433.
- Abou-Awad, B.A., El-Sherif, A.A., Hassan, M.F. & Abou-Elela, M.M. (1998c) Studies on development, longevity, fecundity and predation of *Amblyseius olivi* Nasr & Abou-Awad (Acari: Phytoseiidae) on various kinds of prey and diets. *Journal of Plant Diseases and Protection*, 105, 538–544.
- Amitai, S. & Grinberg, T. (1971) Description of a new phytoseiid genus and species (Acarina: Mesostigmata) from Israel. *Israel Journal of Entomology*, 6, 327–335.
- Amitai, S. & Swirski, E. (1966) Illustrations of spermathecae in several previously described phytoseiid mites (Acarina) from Hong Kong and Israel. *Israel Journal of Agricultural Research*, 16, 19–24.
- Amitai, S. & Swirski, E. (1978) A new genus and new records of phytoseiid mites (Mesostigmata: Phytoseiidae) from Israel. *Israel Journal of Entomology*, 12, 123–143.
- Amitai, S. & Swirski, E. (1982) A new species of *Amblyseius* Berlese (Acarina: Phytoseiidae) from Sinai. *Israel Journal of Entomology*, 16, 63–67.
- Aponte, O. & McMurtry, J.A. (1993) Phytoseiid mites of Venezuela (Acari: Phytoseiidae). *International Journal of Acarology*, 19, 149–157.
<http://dx.doi.org/10.1080/01647959308683974>
- Arutunjan, E.S. (1969) Species of phytoseiid mites on fruit trees in Erevan and neighbourhood (Parasitiformes, Phytoseiidae). *Biologicheskii Zhurnal Armenii, Akademiya Nauk Armyanskoi SSR*, 22, 43–53.
- Arutunjan, E.S. (1970) Phytoseiid mites (Phytoseiidae) on agricultural crops in the Armenian SSR. *Akademiya Nauk Armyanskoi SSR, Otdelenie Biologicheskikh Nauk, Dissertatsii na Soiskanie Uchenoi Stepeni Kandidata Biologicheskikh Nauk, Zooliya, Armenia*, 97, 1–31.
- Arutunjan, E.S. (1977) *Identification manual of phytoseiid mites of agricultural crops of the Armenian SSR*. Akademiya Nauk Armyanskoi SSR, Zoologicheskii Institut, Erevan, Armenia, 177 pp.
- Athias-Henriot, C. (1958) Contribution à la connaissance du genre *Typhlodromus* Scheuten (Acariens Parasitiformes, Phytoseiidae). Description de deux espèces nouvelles d'Algérie et clé des espèces du groupe *finlandicus*. *Revue de Pathologie Végétale et d'Entomologie Agricole de France*, 37, 179–186.
- Athias-Henriot, C. (1959) Acariens planticoles d'Algérie. I. 5e contribution au genre *Amblyseius* Berlese (Phytoseiidae). II.

- Première liste d'Actinochitinosi (Cheyletidae, Caligonellidae, Hemisarcoptidae). *Bulletin de l'Academy Royal de Belgique, Class des Sciences, Series 5*, 45, 130–153.
- Athias-Henriot, C. (1960a) Nouveaux *Amblyseius* d'Algérie (Parasitiformes, Phytoseiidae). *Acarologia*, 2, 288–299.
- Athias-Henriot, C. (1960b) Phytoseiidae et Aceosejidae (Acarina: Gamasina) d'Algérie. IV. Genre *Typhlodromus* Scheuten, 1857. *Bulletin de la Société d'Histoire Naturelle de l'Afrique du Nord*, 51, 62–107.
- Athias-Henriot, C. (1961) Mesostigmates (Urop. excl.) edaphiques Méditerranéens (Acaromorpha, Anactinotrichida). *Acarologia*, 3, 381–509.
- Athias-Henriot, C. (1962) *Amblyseius swirskii*, un nouveau phytoséiide voisin d'*A. andersoni* (Acariens anactinotriches). *Annales de l'École Nationale d'Agriculture d'Alger*, 3 (5), 1–7.
- Athias-Henriot, C. (1966) Contribution à l'étude des *Amblyseius* paléarctiques (Acariens anactinotriches, Phytoseiidae). *Bulletin Scientifique de Bourgogne*, 24, 181–230.
- Athias-Henriot, C. (1977) Nouvelles notes sur les Amblyseiini. III. Sur le genre *Cydnodromus*: Redefinition, composition [Parasitiformes, Phytoseiidae]. *Entomophaga*, 22, 61–73.
<http://dx.doi.org/10.1007/bf02372991>
- Athias-Henriot, C. (1978) Typhlodromini du Vaucluse, avec description de trois espèces nouvelles (Arachnides, Gamasides, Phytoseiidae). *Annales de Zoologie et d'Ecologie Animale*, 10, 695–701.
- Athias-Henriot, C. & Fauvel, G. (1981) *Pegodromus crassipilis*, n. g., n. sp., Typhlodromini nouveau du sud de la France (Parasitiformes: Phytoseiidae). *International Journal of Acarology*, 7, 71–74.
<http://dx.doi.org/10.1080/01647958108683246>
- Barbar, Z. (2013) Survey of phytoseiid mite species (Acari: Phytoseiidae) in citrus orchards in Lattakia governorate, Syria. *Acarologia*, 53, 247–261.
<http://dx.doi.org/10.1051/acarologia/20132098>
- Basha, A.E. & Yousef, A.A. (2000) Two new species of the family Phytoseiidae from Egypt (Acari: Phytoseiidae). *Acarologia*, 40, 231–235.
- Basha, A.E., Mahrous, M.E. & Mostafa, E.M. (2004) Descriptions of two new species of phytoseiid mites (Acari: Phytoseiidae) from Egypt. *International Journal of Acarology*, 30, 347–350.
<http://dx.doi.org/10.1080/01647950408684404>
- Basha, A.E., Yousef, A.A. & Mostafa, E.M. (2002) Morphology and biology of *Euseius metwalli* n. sp. (Acari: Gamasida: Phytoseiidae). *Acarologia*, 42, 29–37.
- Basha, A.E., Yousef, A.A., Ibrahim, M.H. & Mostafa, E.M. (2001) Five new phytoseiids from Egypt (Acari: Gamasida: Phytoseiidae). *Al-Azhar Journal of Agricultural Research*, 33, 371–386.
- Beard, J.J. (2001) A review of Australian *Neoseiulus* Hughes and *Typhlodromips* De Leon (Acari : Phytoseiidae : Amblyseiinae). *Invertebrate Taxonomy*, 15, 73–158.
- Beglyarov, G.A. (1958) Species of Phytoseiidae (Parasitiformes: Gamasoidea) predatory upon tetranychid mites in orchards of the Krasnodar region. *Trudy Vsesoiuznogo Institut Zashchity Rastenii*, 10, 98–124.
- Beglyarov, G.A. (1981) Keys to the determination of phytoseiid mites of the USSR. *Information Bulletin International Organization for Biological Control of Noxious Animals and Plants, East Palaearctic Section*. Leningrad, Russia, 2, 1–97.
- Berlese, A. (1889) *Acari, Myriopoda et Scorpiones hucusque in Italia reperta*, 54, 1–19 + Plates 1–10. [Reprint by Junk, The Hague, 1979]
<http://dx.doi.org/10.5962/bhl.title.69269>
- Berlese, A. (1913) *Acarotheca Italica*. Ricci, Firenze, 221 pp.
- Berlese, A. (1914) Acari nuovi. Manipulus IX. *Redia*, 10, 113–150.
- Berlese, A. (1921) Acari, Myriopoda et Pseudoscorpiones hucusque in Italia reperta. I. Indice sinonimico dei generi e delle specie illustrate nei fascicoli 1 a 101. *Redia*, 14, 77–105.
- Blommers, L. & Chazeau, J. (1974) Two new species of predator mites of the genus *Amblyseius* Berlese (Acarina: Phytoseiidae) from Madagascar. *Zeitschrift für Angewandte Entomologie*, 75, 308–315.
<http://dx.doi.org/10.1111/j.1439-0418.1974.tb01856.x>
- Canestrini, G. & Fanzago, F. (1876) Nuovi acari italiani (Seconda Serie). *Atti Societa Veneto-Trentina di Scienze Naturali*, 5, 130–142.
- Chant, D.A. (1957) Descriptions of some phytoseiid mites (Acarina, Phytoseiidae). Part I. Nine new species from British Columbia with keys to the species of British Columbia. Part II. Redescriptions of eight species described by Berlese. *Canadian Entomologist*, 89, 289–308.
<http://dx.doi.org/10.4039/ent89289-7>
- Chant, D.A. (1959) Phytoseiid mites (Acarina: Phytoseiidae). Part I. Bionomics of seven species in southeastern England. Part II. A taxonomic review of the family Phytoseiidae, with descriptions of 38 new species. *Canadian Entomologist, Supplement*, 12, 5–166.
- Chant, D.A. (1965) Generic concepts in the family Phytoseiidae (Acarina: Mesostigmata). *Canadian Entomologist*, 97, 351–374.
<http://dx.doi.org/10.4039/ent97351-4>
- Chant, D.A. & Baker, E.W. (1965) The Phytoseiidae (Acarina) of Central America. *Memoirs of the Entomological Society of Canada*, 97 (41), 3–56.
<http://dx.doi.org/10.4039/entm9741fv>

- Chant, D.A. & Hansell, R.I.C. (1971) The genus *Amblyseius* (Acarina: Phytoseiidae) in Canada and Alaska. *Canadian Journal of Zoology*, 49, 703–758.
<http://dx.doi.org/10.1139/z71-110>
- Chant, D.A. & McMurtry, J.A. (1994) A review of the subfamilies Phytoseiinae and Typhlodrominae (Acari: Phytoseiidae). *International Journal of Acarology*, 20, 223–310.
<http://dx.doi.org/10.1080/01647959408684022>
- Chant, D.A. & McMurtry, J.A. (2003) A review of the subfamily Amblyseiinae Muma (Acari: Phytoseiidae): Part I. Neoseiulini new tribe. *International Journal of Acarology*, 29, 3–46.
<http://dx.doi.org/10.1080/01647950308684319>
- Chant, D.A. & McMurtry, J.A. (2004) A review of the subfamily Amblyseiinae Muma (Acari: Phytoseiidae): Part III. the tribe Amblyseiini Wainstein, subtribe Amblyseiina n. subtribe. *International Journal of Acarology*, 30, 171–228.
<http://dx.doi.org/10.1080/01647950408684388>
- Chant, D.A. & McMurtry, J.A. (2005a) A review of the subfamily Amblyseiinae Muma (Acari: Phytoseiidae): Part V. tribe Amblyseiini, subtribe Proprioseiopsina Chant & McMurtry. *International Journal of Acarology*, 31, 3–22.
<http://dx.doi.org/10.1080/01647950508684412>
- Chant, D.A. & McMurtry, J.A. (2005b) A review of the subfamily Amblyseiinae Muma (Acari: Phytoseiidae): Part VI. the tribe Euseiini n. tribe, subtribes Typhlodromalina n. subtribe, Euseiina n. subtribe, and Ricoseiina n. subtribe. *International Journal of Acarology*, 3, 187–224.
<http://dx.doi.org/10.1080/01647950508684424>
- Chant, D.A. & McMurtry, J.A. (2007) *Illustrated keys and diagnoses for the genera and subgenera of the Phytoseiidae of the world (Acari: Mesostigmata)*. Indira Publishing House, West Bloomfield, USA, 220 pp.
- Chant, D.A. & Yoshida-Shaul, E. (1982) A world review of the *soleiger* species group in the genus *Typhlodromus* Scheuten (Acarina: Phytoseiidae). *Canadian Journal of Zoology*, 60, 3021–3032.
<http://dx.doi.org/10.1139/z82-385>
- Chant, D.A. & Yoshida-Shaul, E. (1983) A world review of five similar species groups in the genus *Typhlodromus* Scheuten: Part II. The *conspicuus* and *cornus* groups (Acarina: Phytoseiidae). *Canadian Journal of Zoology*, 61, 1041–1057.
<http://dx.doi.org/10.1139/z83-138>
- Chant, D.A. & Yoshida-Shaul, E. (1984) A world review of the *pomi* species group in the genus *Typhlodromus* Scheuten (Acari: Phytoseiidae). *Canadian Journal of Zoology*, 62, 2610–2630.
<http://dx.doi.org/10.1139/z84-382>
- Chant, D.A. & Yoshida-Shaul, E. (1986a) A world review of the *ecclesiasticus* species group in the genus *Typhlodromus* Scheuten (Acarina: Phytoseiidae). *Canadian Journal of Zoology*, 64, 447–466.
<http://dx.doi.org/10.1139/z86-069>
- Chant, D.A. & Yoshida-Shaul, E. (1986b) A new subfamily, Cydnodromellinae, in the family Phytoseiidae (Acari: Gamasina). *Canadian Journal of Zoology*, 64, 2811–2823.
<http://dx.doi.org/10.1139/z86-405>
- Chant, D.A. & Yoshida-Shaul, E. (1987) A world review of the *pyri* species group in the genus *Typhlodromus* Scheuten (Acari: Phytoseiidae). *Canadian Journal of Zoology*, 65, 1770–1804.
<http://dx.doi.org/10.1139/z87-272>
- Chant, D.A. & Yoshida-Shaul, E. (1991) Adult ventral setal patterns in the family Phytoseiidae (Acari: Gamasina). *International Journal of Acarology*, 17, 187–199.
<http://dx.doi.org/10.1080/01647959108683906>
- Chant, D.A., Hansell, R.I.C. & Yoshida-Shaul, E. (1974) The genus *Typhlodromus* Scheuten (Acarina: Phytoseiidae) in Canada and Alaska. *Canadian Journal of Zoology*, 52, 1265–1291.
<http://dx.doi.org/10.1139/z74-168>
- Chant, D.A., Hansell, R.I.C., Rowell, H.J. & Yoshida-Shaul, E. (1978) A study of the family Phytoseiidae (Acarina: Mesostigmata) using the methods of numerical taxonomy. *Canadian Journal of Zoology*, 56, 1330–1347.
<http://dx.doi.org/10.1139/z78-185>
- Chaudhri, W.M., Akbar, S. & Rasool, A. (1974) Taxonomic studies of the mites belonging to the families Tenuipalpidae, Tetranychidae, Tuckerellidae, Caligonellidae, Stigmaeidae and Phytoseiidae. *University of Agriculture Technical Bulletin, Lyallpur, Pakistan*, 1, 1–250.
- Chaudhri, W.M., Akbar, S. & Rasool, A. (1979) *Studies on the Predatory Leaf Inhabiting Mites of Pakistan*. University of Agriculture, Faisalabad, Pakistan, 234 pp.
- Çobanoğlu, S. (1989a) Determination of the Phytoseiidae (Acarina: Mesostigmata) species from vegetable growing areas of Antalya [in Turkish]. *Bitki Koruma Bülteni*, 29, 47–64.
- Çobanoğlu, S. (1989b) Some phytoseiid mite species (Acarina, Phytoseiidae) determined in citrus orchards in some regions of Turkey. *Türkiye Entomoloji Dergisi*, 13, 163–178.
- Çobanoğlu, S. (1993) Systematic studies on the Phytoseiidae (Acarina) species, found in the apple growing areas of Turkey II. *Türkiye Entomoloji Dergisi*, 17, 99–116.
- Collyer, E. (1982) The Phytoseiidae of New Zealand (Acarina) I. The genera *Typhlodromus* and *Amblyseius* - keys and new species. *New Zealand Journal of Zoology*, 9, 185–206.
<http://dx.doi.org/10.1080/03014223.1982.10423848>

- Congdon, B.D. (2002) The family Phytoseiidae (Acari) in western Washington State with descriptions of three new species. *International Journal of Acarology*, 28, 3–27.
<http://dx.doi.org/10.1080/01647950208684275>
- Daneshvar, H. (1987) Some predatory mites from Iran, with descriptions of one new genus and six new species (Acari: Phytoseiidae, Ascidae). *Entomologie et Phytopathologie Appliquees*, 54, 13–37. [in English, in Persian: 55–73]
- De Leon, D. (1958) Four new *Typhlodromus* from southern Florida (Acarina: Phytoseiidae). *The Florida Entomologist*, 41, 73–76.
<http://dx.doi.org/10.2307/3492363>
- De Leon, D. (1959) Seven new *Typhlodromus* from Mexico with collection notes on three other species (Acarina: Phytoseiidae). *The Florida Entomologist*, 42, 113–121.
<http://dx.doi.org/10.2307/3492606>
- De Leon, D. (1962) Twenty-three new phytoseiids, mostly from southeastern United States (Acarina: Phytoseiidae). *The Florida Entomologist*, 45, 11–27.
<http://dx.doi.org/10.2307/3492899>
- De Leon, D. (1966) Phytoseiidae of British Guyana with keys to species (Acarina: Mesostigmata). *Studies on the Fauna of Suriname and other Guyanas*, 8, 81–102.
- Demite, P.R., Moraes, G.J. de, McMurtry, J.A., Denmark, H.A. & Castilho, R. de C. (2014) Phytoseiidae Database. Available from: <http://www.lea.esalq.usp.br/phytoseiidae/> (Access 20 December 2013)
- Denmark, H.A. (1966) Revision of the genus *Phytoseius* Ribaga, 1904 (Acarina: Phytoseiidae). *Florida Department of Agriculture Bulletin*, 6, 1–105.
- Denmark, H.A. (1992a) Two new species of *Typhlodromus* (Acari: Phytoseiidae) from North Africa. *Israel Journal of Entomology*, 25–26, 13–18.
- Denmark, H.A. (1992b) A revision of the genus *Typhlodromus* Scheuten (Acari: Phytoseiidae). *Occasional Papers of the Florida State Collection of Arthropods*, 7, 1–43.
- Denmark, H.A. (1993) Revision of the genus *Phytodromus* Muma (Acari: Phytoseiidae). *International Journal of Acarology*, 19, 107–121.
<http://dx.doi.org/10.1080/01647959308683969>
- Denmark, H.A. & Edland, T. (2002) The subfamily Amblyseinae Muma (Acari: Phytoseiidae) in Norway. *International Journal of Acarology*, 28, 195–220.
<http://dx.doi.org/10.1080/01647950208684296>
- Denmark, H.A. & Evans, G.A. (2011) *Phytoseiidae of North America and Hawaii (Acari: Mesostigmata)*. Indira Publishing House, West Bloomfield, Michigan, USA, 451 pp.
- Denmark, H.A. & Muma, M.H. (1973) Phytoseiid mites of Brazil (Acarina: Phytoseiidae). *Revista Brasileira de Biologia*, 33, 235–276.
- Denmark, H.A. & Rather, A.Q. (1984) Revision of the genus *Typhloctonus* Muma, 1961 (Acarina: Mesostigmata). *International Journal of Acarology*, 10, 163–177.
<http://dx.doi.org/10.1080/01647958408683371>
- Denmark, H.A. & Rather, A.Q. (1996) Revision of the genus *Neoseiulella* Muma (Acari: Phytoseiidae). *International Journal of Acarology*, 22, 43–77.
<http://dx.doi.org/10.1080/01647959608684080>
- Denmark, H.A. & Welbourn, W.C. (2002) Revision of the genera *Amblydromella* Muma and *Anthoseius* De Leon (Acari: Phytoseiidae). *International Journal of Acarology*, 28, 291–316.
<http://dx.doi.org/10.1080/01647950208684308>
- Denmark, H.A., Evans, G.A., Aguilar, H., Vargas, C. & Ochoa, R. (1999) *Phytoseiidae of Central America (Acari: Mesostigmata)*. Indira Publishing House, West Bloomfield, Michigan, USA, 125 pp.
- Dosse, G. (1957) Morphologie und biologie von *Typhlodromus zwölferi* n. sp. (Acar., Phytoseiidae). *Zeitschrift für Angewandte Entomologie*, 41, 301–311.
<http://dx.doi.org/10.1111/j.1439-0418.1957.tb01295.x>
- Dosse, G. (1958) Über einige neue Raubmilbenarten (Acar. Phytoseiidae). *Pflanzenschutz Berichte*, 21, 44–61.
- Dosse, G. (1961) Zur Klärung der Artenfrage von *Typhlodromus (Typhlodromus) pyri* Scheuten, 1857 (= *T. tiliae* Oud. 1929) und *Typhlodromus (Typhlodromus) sebutali* n. sp. (Acar., Phytoseiidae). *Zeitschrift für Angewandte Zoologie*, 48, 313–323.
- Dosse, G. (1967) Schadmilben des Libanons und ihre Prädatoren. *Zeitschrift für Angewandte Entomologie*, 59, 16–48.
<http://dx.doi.org/10.1111/j.1439-0418.1967.tb03837.x>
- Duso, C. & Fontana, P. (2002) On the identity of *Phytoseius plumifer* (Canestrini & Fanzago, 1876) (Acari: Phytoseiidae). *Acarologia*, 42, 127–136.
- Ehara, S. (1959) Some predatory mites of the genera *Typhlodromus* and *Amblyseius* from Japan (Phytoseiidae). *Acarologia*, 1, 285–295.
- Ehara, S. (1964) Some mites of the families Phytoseiidae and Blattisocidae from Japan (Acarina: Mesostigmata). *Journal of the Faculty of Science, Hokkaido University, Series VI (Zoology)*, 15, 378–394.
- Ehara, S. (1966) A tentative catalogue of predatory mites of Phytoseiidae known from Asia, with descriptions of five new species from Japan. *Mushi*, 39 (2), 9–30.

- Ehara, S. (1972) Some phytoseiid mites from Japan, with descriptions of thirteen new species (Acarina: Mesostigmata). *Mushi*, 46 (12), 137–173.
- Ehara, S. (1975) List and keys to Phytoseiidae of Japan. In: Yasumatsu, K. & Mori, H. (Eds.), *JIBP Synthesis, 7, Approaches to Biological Control*. University of Tokyo Press, Japan, pp. 25–37.
- Ehara, S. (1985) Five species of phytoseiid mites from Japan with descriptions of two new species (Acarina, Phytoseiidae). *Zoological Science*, 2, 115–121.
- Ehara, S. & Amano, H. (1998) A revision of the mite family Phytoseiidae in Japan (Acari: Gamasina), with remarks on its biology. *Species Diversity*, 3, 25–73.
- Ehara, S. & Amano, H. (2004) Checklist and keys to Japanese Amblyseiinae (Acari: Gamasina: Phytoseiidae). *Journal of the Acarological Society of Japan*, 13, 1–30.
<http://dx.doi.org/10.2300/acari.13.1>
- Ehara, S., Okada, Y. & Kato, H. (1994) Contribution to the knowledge of the mite family Phytoseiidae in Japan (Acari: Gamasina). *The Journal of the Faculty of Education, Tottori University, Natural Science*, 42, 119–160.
- El-Badry, E.A. (1967a) Five new phytoseiid mites from U.A.R., with collection notes on three other species (Acarina: Phytoseiidae). *Indian Journal of Entomology*, 29, 177–184.
- El-Badry, E.A. (1967b) New species of the genus *Typhlodromus* from Sudan (Acari: Phytoseiidae). *Journal of Zoology, London*, 153, 463–474.
<http://dx.doi.org/10.1111/j.1469-7998.1967.tb04978.x>
- El-Badry, E.A. (1967c) Three new species of phytoseiid mites preying on the cotton whitefly, *Bemisia tabaci*, in the Sudan (Acarina: Phytoseiidae). *The Entomologist*, 100, 106–111.
- El-Badry, E.A. (1968a) The genus *Phytoseius* in Egypt and the Sudan. *Annals of the Entomological Society of America*, 61, 1083–1087.
- El-Badry, E.A. (1968b) Some predatory mites of the genera *Typhlodromus* and *Amblyseius* from the United Arab Republic (Acarina: Phytoseiidae). *The Entomologist*, 101, 139–144.
- El-Badry, E.A. (1968c) Three new species of phytoseiid mites from western Sudan (Acarina: Phytoseiidae). *Revue de Zoologie et Botanique Africaine*, 77, 321–328.
- El-Badry, E.A. (1970) Taxonomic review of the phytoseiid mites of Egypt [Acarina: Phytoseiidae]. *Bulletin de la Société Entomologique d'Égypte*, 54, 495–510.
- El-Badry, E.A. & El-Banhawy, E.M. (1968) The effect of non-prey food, mainly pollen, on the development, survival, and fecundity of *Amblyseius gossipi* (Acarina: Phytoseiidae). *Entomologia Experimentalis et Applicata*, 11, 269–272.
<http://dx.doi.org/10.1111/j.1570-7458.1968.tb02054.x>
- El-Bagoury, M.E., Hekal, A.M. & Hafez, S.F. (1989) Biological aspects of *Phytoseius solanus* El-Badry fed on *Eutetranychus orientalis* (Klein) and *Brevipalpus pulcher* (C. & F.). *Annals Agricultural Science, Faculty of Agriculture, Ain Shams University, Cairo, Egypt*, 34, 459–466.
- El-Banhawy, E.M. (1976) A new predacious mite of the genus *Typhlodromus* Scheuten from Brazil. *Revista Brasileira de Biologia*, 36, 531–534.
- El-Banhawy, E.M. (1979) Records on phytoseiid (Acari) mites of Peru. *International Journal of Acarology*, 5, 111–116.
<http://dx.doi.org/10.1080/01647957908683133>
- El-Borolossy, M.A. (1979) *Ecological and biological studies on some predacious mites (Phytoseiidae)*. M.Sc. Thesis, Faculty of Agriculture, Cairo University, 101 pp.
- El-Halawany, M.E. & Abdel-Samad, M.A. (1990) Three new phytoseiid species. *Agricultural Research Review*, 68, 87–96.
- El-Halawany, M.E. & Kandeel, M.M.H. (1985) A new predator of the genus *Amblyseius* in Egypt (Acari: Gamasida: Phytoseiidae). *Agricultural Research Review*, 63, 115–118.
- Evans, G.O. (1952) A new typhlodromid mite predaceous on *Tetranychus bimaculatus* Harvey in Indonesia. *Annals and Magazine of Natural History, Series 12*, 5, 413–416.
<http://dx.doi.org/10.1080/00222935208654311>
- Evans, G.O. (1958) Some mesostigmatid mites from a nest of social spiders in Uganda. *Annals and Magazine of Natural History, Series 13*, 1, 580–590.
<http://dx.doi.org/10.1080/00222935808650985>
- Faraji, F., Çobanoğlu, S. & Çakmak, I. (2011) A checklist and a key for the Phytoseiidae species of Turkey with two new species records (Acari: Mesostigmata). *International Journal of Acarology*, 37 (Supplement 1), 221–243.
<http://dx.doi.org/10.1080/01647954.2011.558851>
- Faraji, F., Hajizadeh, J., Ueckermann, E.A., Kamali, K. & McMurtry, J.A. (2007) Two new records for Iranian phytoseiid mites with synonymy and keys to the species of *Typhloseiulus* Chant & McMurtry and Phytoseiidae in Iran (Acari: Mesostigmata). *International Journal of Acarology*, 33, 231–239.
<http://dx.doi.org/10.1080/01647950708684527>
- Ferragut, F. & Escudero, A. (1997) Taxonomía y distribución de los ácaros depredadores del género *Euseius* Wainstein 1962, en España (Acari: Phytoseiidae). *Boletín de Sanidad Vegetal Plagas*, 23, 227–235.
- Ferragut, F. & Pena-Estevez, M.A. (2003) Phytoseiid mites of the Canary Islands (Acari: Phytoseiidae): 1. Gran Canaria Island. *International Journal of Acarology*, 29, 149–170.
<http://dx.doi.org/10.1080/01647950308683654>
- Ferragut, F. & Ueckermann, E.A. (2012) A new species and new records of the subgenus *Typhlodromus* Scheuten from Spain,

- with a key to the world species (Acari: Phytoseiidae). *Journal of Natural History*, 46, 1731–1745.
<http://dx.doi.org/10.1080/00222933.2012.681318>
- Ferragut, F., Pérez Moreno, I., Iraola, V. & Escudero, A. (2010) *Ácaros depredadores de la Familia Phytoseiidae en las plantas cultivadas*. Ediciones Agrotécnicas, Madrid, 202 pp.
- Fouly, A.H. & Hassan, M.F. (1992) Effect of crowding and food level on the predaceous phytoseiid mite *Amblyseius gossipi* (El-Badry) fed on white fly *Bemisia tabaci* (Gennadius). *Proceedings of the Zoological Society of Egypt*, 40, 141–146.
- Garman, P. (1958) New species belonging to the genera *Amblyseius* and *Amblyseiusopsis* with keys to *Amblyseius*, *Amblyseiusopsis*, and *Phytoseiulus*. *Annals of the Entomological Society of America*, 51, 69–79.
- Gerson, U., Smiley, R.L. & Ochoa, R. (2003) *Mites (Acari) for Pest Control*. Blackwell Science Ltd, Cambridge, 539 pp.
- Gilyarov, M.S., Bregetova, N.G., Wainstein, B.A., Kadite, B.A., Koroleva, E.V., Petrova, A.D., Tikhomirov, S.I. & Shcherbak, G.I. (1977) *Manual of Edaphic Mites (Mesostigmata)*. Akademiya Nauk SSSR, “Nauka” Publishing House, Leningrad, Russia, 718 pp.
- Gonzalez, R.H. & Schuster, R.O. (1962) Especies de la familia Phytoseiidae en Chile I. (Acarina: Mesostigmata). *Boletim Técnico. Estación Experimental Agronomica. Universidad de Chile, Facultad de Agronomía, Chile*, 16, 1–35.
- Guanilo, A.D., Moraes, G.J. de, Knapp, M. (2008a) Phytoseiid mites (Acari: Phytoseiidae) of the subfamilies Phytoseiinae Berlese and Typhlodrominae Wainstein from Peru, with descriptions of two new species. *Zootaxa*, 1729, 49–60.
- Guanilo, A.D., Moraes, G.J. de, Knapp, M. (2008b) Phytoseiid mites (Acari: Phytoseiidae) of the subfamily Amblyseiinae Muma from Peru, with descriptions of four new species. *Zootaxa*, 1880, 1–47.
- Guanilo, A.D., Moraes, G.J. de, Toledo, S. & Knapp, M. (2008c) Phytoseiid mites (Acari: Phytoseiidae) from Argentina, with description of a new species. *Zootaxa*, 1884, 1–35.
- Gupta, S.K. (1980) New species of *Iphiseius* Berlese and *Paraamblyseius* Muma from India (Acarina, Phytoseiidae). *Entomologist's Monthly Magazine*, 115, 213–217.
- Gupta, S.K. (1985) *Plant Mites of India. Vol. 5. Zoological Survey of India Handbook Series*, Calcutta, India, 520 pp.
- Gupta, S.K. (1986) *Fauna of India (Acari: Mesostigmata) Family: Phytoseiidae*. Zoological Survey of India, Calcutta, India, 350 pp.
- Hassan, A.S., El-Nahal, A.K.M. & El-Badry, E.A. (1959) Infestation of cotton with spider mites. I. The species of spider mites found on cotton plants in Egypt and their predators. *Bulletin de la Société Entomologique d'Égypte*, 43, 357–364.
- Hassan, M.F., Afifi, A.M. & Nawar, M.S. (1986) A new species of the genus *Typhlodromus* (Acari: Gamasida: Phytoseiidae). *Bulletin de la Société Entomologique d'Égypte*, 66, 207–209.
- Hernandes, F.A., Kreiter, S. & Tixier, M.-S. (2012) The first electronic polytomous key to the world species of the subgenus *Typhlodromus (Anthoseius)* DeLeon (Acari: Phytoseiidae). *Zootaxa*, 3451, 46–59.
- Hirschmann, W. (1962) Gangsystematik der Parasitiformes. *Acarologie. Schriftenreihe für Vergleichende Milbenkunde*, 5, 1–80 + 32 plates.
- Hoda, F.M., Ibrahim, G.A., Taha, H.A. & El-Naggar, M.E. (1986) Mites associated with pea-nutplant in Egypt. *Bulletin de la Societe Entomologique d'Égypte*, 66, 107–111.
- Hughes, A.M. (1948) *The Mites Associated with Stored Food Products*. His Majesty's Stationery Office, London, 168 pp.
- Hughes, A.M. (1961) *The Mites of Stored food*. Ministry of Agriculture, Fisheries and Food, London, 287 pp.
<http://dx.doi.org/10.1177/146642406108100633>
- Kandeel, M.M.H. & El-Halawany, M.E. (1985) A new predatory mite species, *Typhlodromus kadii* (Acarina: Phytoseiidae) in Egypt. *Proceedings of Egypt's National Conference on Entomology, December 1982, Egypt*, 1, 463–468.
- Kandeel, M.M.H. & El-Halawany, M.E. (1986) A new mite species, *Amblyseius aegyptocitri* n. sp. (Acari: Phytoseiidae) in Egypt. *Bulletin de la Société Entomologique d'Égypte*, 66, 1–4.
- Kandeel, M.M.H. & Nassar, O.A. (1986) Field observations on the predatory mites of citrus pests along with a key to the Egyptian species (Acari). *Bulletin de la Société Entomologique d'Égypte*, 66, 169–176.
- Kanouh, M., Kreiter, S., Douin M. & Tixier, M.-S. (2012) Revision of the genus *Neoseiulella* Muma (Acari: Phytoseiidae). Re-description of species, synonymy assessment, biogeography, plant supports and key to adult females. *Acarologia*, 52, 259–348.
<http://dx.doi.org/10.1051/acarologia/20122048>
- Karg, W. (1970) Neue Arten der Raubmilbenfamilie Phytoseiidae Berlese, 1916 (Acarina, Parasitiformes). *Deutsche Entomologische Zeitschrift, N. F.*, 17, 289–301.
<http://dx.doi.org/10.1002/mmnd.4810170402>
- Karg, W. (1971) Acari (Acarina), Milben, Unterordnung Anactinochaeta (Parasitiformes): Die freilebenden Gamasina (Gamasides), Raubmilben. *Die Tierwelt Deutschlands*, 59, 1–475.
<http://dx.doi.org/10.1002/mmnd.4820300510>
- Karg, W. (1982) Diagnostic and systematics of predatory mites of the family Phytoseiidae Berlese in orchards. *Zoologische Jahrbücher Abteilung für Systematik, Ökologie und Geographie der Tiere*, 109, 188–210.
- Karg, W. (1983) Systematische untersuchung der Gattungen und Untergattungen der Raubmilbenfamilie Phytoseiidae Berlese, 1916, mit der beschreibung von 8 neuen Arten. *Mitteilungen Zoologisches Museum in Berlin*, 59, 293–328.
<http://dx.doi.org/10.1002/mmzn.4830590203>
- Karg, W. (1989a) New predatory mite species of the genus *Proprioseiopsis* Muma, 1961 (Acarina, Parasitiformes) with keys for determination. *Zoologische Jahrbücher Abteilung für Systematik, Ökologie und Geographie der Tiere*, 116, 199–216.
- Karg, W. (1989b) Zur Kenntnis der Raubmilben der *Typhlodromus pyri*-gruppe (Acarina, Phytoseiidae). *Deutsche*

- Entomologische Zeitschrift*, N. F., 36, 273–282.
<http://dx.doi.org/10.1002/mmnd.19890360409>
- Karg, W. (1991) The predatory mite species of the Phytoseiidae Berlese (Acarina) of central Europe and adjoining areas. *Zoologische Jahrbücher Abteilung für Systematik, Ökologie und Geographie der Tiere*, 118, 1–64.
- Karg, W. (1993) Acari (Acarina), Milben Parasitiformes (Anactinochaeta) Cohors Gamasina Leach, Raubmilben. Second Edition. *Die Tierwelt Deutschlands*, 59, 1–523.
- Koch, C.L. (1839) *Deutschlands Crustaceen, Myriapoden und Arachniden. Ein Beitrag zur Deutschen Fauna*. Vol. 25 Herrich-Schäffer, Regensburg, 38 pp.
- Kolodochka, L.A. (1978) *Manual for the Identification of Plant-Inhabiting Phytoseiid Mites*. Akademii Nauk Ukrainian SSR, Instituta Zoologii, Naukova Dumka, Kiev, Ukraine, 79 pp.
- Kreiter, S., Tixier, M.-S., Sahraoui, H., Lebdi-Grissa, K., Ben Chabaan, S., Chatti, A., Chermiti, B., Khoualdia, O. & Ksantini, M. (2010) Phytoseiid mites (Acari: Mesostigmata) from Tunisia: catalogue, biogeography, and key for identification. *Tunisian Journal of Plant Protection*, 5, 151–178.
- Lehman, R.D. (1982) Mites (Acari) of Pennsylvania conifers. *Transactions of the American Entomological Society*, 108, 181–286.
- Livshitz, I.Z. & Kuznetsov, N.N. (1972) Phytoseiid mites from Crimea (Parasitiformes: Phytoseiidae). In: Pests and diseases of fruit and ornamental plants. *Proceedings of the All-Union V. I. Lenin Academy of Agricultural Science*. The State Nikita Botanical Gardens, Yalta, Ukraine, 61, 13–64.
- MacGill, E.I. (1939) A gamasid mite (*Typhlodromus thripsi* n. sp.), a predator of *Thrips tabaci* Lind. *Annals of Applied Biology*, 26, 309–317.
<http://dx.doi.org/10.1111/j.1744-7348.1939.tb06973.x>
- McGregor, E.A. (1954) Two new mites in the genus *Typhlodromus* (Acarina: Phytoseiidae). *Southern California Academy of Science Bulletin*, 53, 89–92.
- McGregor, E.A. (1956) The mites of citrus trees in southern California. *Memoirs of Southern California Academy of Sciences*, 3 (3), 5–42.
- McMurtry, J.A. (1977) Some predaceous mites [Phytoseiidae] on citrus in the Mediterranean region. *Entomophaga*, 22, 19–30.
<http://dx.doi.org/10.1007/bf02372986>
- McMurtry, J.A. & Badii, M.H. (1989) Reproductive compatibility in widely separated populations of three species of phytoseiid mites (Acari: Phytoseiidae). *Pan-Pacific Entomologist*, 65, 397–402.
- McMurtry, J.A., Moraes, G.J.de & Sourassou, N.F. (2013) Revision of the lifestyles of phytoseiid mites (Acari: Phytoseiidae) and implications for biological control strategies. *Systematic & Applied Acarology*, 18, 297–320.
<http://dx.doi.org/10.11158/saa.18.4.1>
- Miedema, E. (1987) Survey of phytoseiid mites (Acari: Phytoseiidae) in orchards and surrounding vegetation of northwestern Europe, especially in the Netherlands. Keys, descriptions and figures. *Netherlands Journal of Plant Pathology*, 93 (2), 1–64.
<http://dx.doi.org/10.1007/bf01984462>
- Momen, F.M. (2010) Intra- and interspecific predation by *Neoseiulus barkeri* and *Typhlodromus negevi* (Acari: Phytoseiidae) on different life stages: predation rates and effects on reproduction and juvenile development. *Acarina*, 18, 81–88.
- Momen, F.M. (2011) Life tables and feeding habits of *Proprioseiopsis cabonus*, a specific predator of tydeid mites (Acari: Phytoseiidae and Tydeidae). *Acarina*, 19, 103–109.
- Moraes, G.J. de & McMurtry, J.A. (1983) Phytoseiid mites (Acarina) of northeastern Brazil with descriptions of four new species. *International Journal of Acarology*, 9, 131–148.
<http://dx.doi.org/10.1080/01647958308683326>
- Moraes, G.J. de & McMurtry, J.A. (1988) Some phytoseiid mites from Kenya, with description of three new species. *Acarologia*, 29, 13–18.
- Moraes, G.J. de & Mesa, N.C. (1988) Mites of the family Phytoseiidae (Acari) in Colombia, with descriptions of three new species. *International Journal of Acarology*, 14, 71–88.
<http://dx.doi.org/10.1080/01647958808683790>
- Moraes, G.J. de, McMurtry, J.A. & Denmark, H.A. (1986) *A catalog of the Mite Family Phytoseiidae. References to Taxonomy, Synonymy, Distribution and Habitat*. EMBRAPA - DDT, Brasilia, Brazil, 353 pp.
- Moraes, G.J. de, McMurtry, J.A. & Lopes, P.C. (2006) Redefinition of *Metaseiulus* Muma (Acari: Phytoseiidae) and description of a new species from Brazil. *International Journal of Acarology*, 32, 351–354.
<http://dx.doi.org/10.1080/01647950608684481>
- Moraes, G.J.de, McMurtry, J.A. & Yaninek, J.S. (1989) Some phytoseiid mites (Acari, Phytoseiidae) from tropical Africa with description of a new species. *International Journal of Acarology*, 15, 95–102.
<http://dx.doi.org/10.1080/01647958908683830>
- Moraes, G.J. de, McMurtry, J.A., Denmark, H.A. & Campos, C.B. (2004) A revised catalog of the mite family Phytoseiidae. *Zootaxa*, 434, 1–494.
- Moraes, G.J. de, Ueckermann, E.A., Oliveira, A.R. & Yaninek, J.S. (2001) Phytoseiidae mites of the genus *Euseius* (Acari: Phytoseiidae) from Sub-Saharan Africa. *Zootaxa*, 3, 1–70.
- Moraes, G.J.de, Zannou, I.D., Ueckermann, E.A., Oliveira, A.R., Hanna, R. & Yaninek, J.S. (2007) Species of the subtribes Arrenoseiina and Proprioseiopsina (Tribe Amblyseiini) and the tribe Typhlodromipsini (Acari: Phytoseiidae) from sub-

- Saharan Africa. *Zootaxa*, 1448, 1–39.
- Moraes, G.J.de, Zannou, I.D., Ueckermann, E.A., Oliveira, A.R., Hanna, R. & Yaninek, J.S. (2008) Phytoseiid mites of the tribe Paraseiulini Wainstein (Acari: Phytoseiidae) from sub-Saharan Africa. *Zootaxa*, 1687, 1–34.
- Muma, M.H. (1955) Phytoseiidae (Acarina) associated with citrus in Florida. *Annals Entomological Society of America*, 48, 262–272.
- Muma, M.H. (1961) Subfamilies, genera, and species of Phytoseiidae (Acarina: Mesostigmata). *Bulletin of the Florida State Museum, Biological Sciences*, 5, 267–302.
- Muma, M.H. (1962) New Phytoseiidae (Acarina: Mesostigmata) from Florida. *Florida Entomologist*, 45, 1–10.
<http://dx.doi.org/10.2307/3492897>
- Muma, M.H. (1967) New Phytoseiidae (Acarina: Mesostigmata) from southern Asia. *Florida Entomologist*, 50, 267–280.
<http://dx.doi.org/10.2307/3493156>
- Muma, M.H. & Denmark, H.A. (1968) Some generic descriptions and name changes in the family Phytoseiidae (Acarina: Mesostigmata). *Florida Entomologist*, 51, 229–240.
<http://dx.doi.org/10.2307/3493424>
- Muma, M.H. & Denmark, H.A. (1969) The *conspicua* species-group of *Typhlodromina* Muma, 1961. *Annals of the Entomological Society of America*, 62, 406–413.
- Muma, M.H., Denmark, H.A. & De Leon, D. (1970) *Phytoseiidae of Florida. Arthropods of Florida and Neighboring Land Areas*, 6. Florida Department of Agriculture and Consumer Services, Division of Plant Industry, Gainesville, Florida, 150 pp.
- Narayanan, E.S. & Kaur, R.B. (1960) Two new species of the genus *Typhlodromus* Scheuten from India (Acarina: Phytoseiidae). *Proceedings of the Indian Academy of Science*, 51B, 1–8.
- Nasr, A.K. & Abou-Awad, B.A. (1985) (1984–1985) A new species of genus *Amblyseius* Berlese from Egypt (Acari: Phytoseiidae). *Bulletin de la Société Entomologique d’Égypte*, 65, 245–249.
- Nasr, A.K., Abou-Elela, M.M. & Saleh, Kh.M.A. (2011) Mites associated with water weeds in Egypt. *Acarines, Journal of the Egyptian Society of Acarology*, 5, 33–36.
- Nassar, O.A. & Kandeel, M.M.H. (1983) Description of a new species of the genus *Phytoseius* Ribaga from Egypt (Acari: Phytoseiidae). *Journal of Agricultural Sciences, Mansoura University*, 8, 1041–1044.
- Negm, M.W., Alatawi, F.J. & Aldryhim, Y.N. (2012a) A new species of *Neoseiulus* Hughes, with records of seven species of predatory mites associated with date palm in Saudi Arabia (Acari: Phytoseiidae). *Zootaxa*, 3356, 57–64.
- Negm, M.W., Alatawi, F.J. & Aldryhim, Y.N. (2012b) Incidence of predatory phytoseiid mites in Saudi Arabia: new records and a key to the Saudi Arabian species (Acari: Mesostigmata: Gamasina). *Systematic and Applied Acarology*, 17, 261–268.
<http://dx.doi.org/10.11158/saa.17.3.6>
- Nesbitt, H.H.J. (1951) A taxonomic study of the Phytoseiinae (Family Laelaptidae) predaceous upon Tetranychidae of economic importance. *Zoologische Verhandelingen*, 12, 1–64 + 32 plates.
- Oudemans, A.C. (1929) Acarologische Aanteekeningen. XCIX. *Entomologische Berichten*, 8, 11–20.
- Oudemans, A.C. (1930) Acarologische Aanteekeningen. CII. *Entomologische Berichten*, 8, 69–74.
- Oliveira, D.C., Charanasri, V., Kongchuensin, M., Konvipasruang, P., Chandrapatya, A. & Moraes, G.J.de (2012) Phytoseiidae of Thailand (Acari: Mesostigmata), with a key for their identification. *Zootaxa*, 3453, 1–24.
- Papadoulis, G.Th. & Emmanouel, N.G. (1991) The genus *Amblyseius* (Acari: Phytoseiidae) in Greece, with the description of a new species. *Entomologia Hellenica*, 9, 35–62.
- Papadoulis, G.Th., Emmanouel, N.G. & Kapaxidi, E.V. (2009) *Phytoseiidae of Greece and Cyprus (Acari: Mesostigmata)*. Indira Publishing House, West Bloomfield, Michigan, 200 pp.
- Pickett, C.H. & Gilstrap, F.E. (1984) Phytoseiidae (Acarina) associated with banks grass mite infestations in Texas. *The Southwestern Entomologist*, 9, 125–133.
- Porath, A. & Swirski, E. (1965) A survey of phytoseiid mites (Acarina: Phytoseiidae) on citrus, with a description of one new species. *Israel Journal of Agricultural Research*, 15, 87–100.
- Prasad, V. (1968) *Amblyseius* mites from Hawaii. *Annals of the Entomological Society of America*, 61, 1514–1521.
- Prasad V. (2012) *Checklist of Phytoseiidae of the World (Acari: Mesostigmata)*. Indira Publishing House, West Bloomfield, Michigan, USA, 1063 pp.
- Pritchard, A.E. & Baker, E.W. (1962) Mites of the family Phytoseiidae from Central Africa, with remarks on the genera of the world. *Hilgardia*, 33 (7), 205–309.
- Radford, C.D. (1950) Systematic Check List of Mite Genera and Type Species. *Union Internationale des Sciences Biologiques, Série C (Section d’Entomologie)*, 1–232.
- Ragusa, S. (1977) Notes on phytoseiid mites in Sicily with a description of a new species of *Typhlodromus* (Acarina: Mesostigmata). *Acarologia*, 18, 379–392.
- Ragusa, S. & Athias-Henriot, C. (1983) Observations on the genus *Neoseiulus* Hughes (Parasitiformes, Phytoseiidae). Redefinition. Composition. Geography. Description of two new species. *Revue Suisse de Zoologie*, 90, 657–678.
- Ragusa, S. & Swirski, E. (1976) Notes on predacious mites of Italy, with a description of two new species and of an unknown male (Acarina: Phytoseiidae). *Redia*, 59, 179–196.
- Ragusa, S. & Swirski, E. (1978) Description of three new species of *Typhlodromus* Scheuten from Italy with redescription of *Typhlodromus baccettii* Lombardini (Acari: Phytoseiidae). *International Journal of Acarology*, 4, 211–220.
<http://dx.doi.org/10.1080/01647957808683118>

- Ramadan, H.A.I., El-Banhawy, E.M. & Afia, S.I. (2009) On the identification of a taxa collected from Egypt in the species sub-group *andersoni*: morphological relationships with related species and molecular analysis of inter and intra-specific variations (Acari: Phytoseiidae). *Acarologia*, 49, 115–120.
- Ramadan, H.A.I., El-Banhawy, E.M., Hassan, A.A. & Afia, S.I. (2004) Genetic variation in the predacious phytoseiid mite, *Amblyseius swirskii* (Acari: Phytoseiidae): analysis of specific mitochondrial and nuclear sequences. *Arab Journal of Biotechnology*, 7, 189–196.
- Rasmy, A.H. & Abou-Awad, B.A. (1972) Mites inhabiting fig trees in Egypt. *Zeitschrift für Angewandte Entomologie*, 70, 314–316.
<http://dx.doi.org/10.1111/j.1439-0418.1972.tb02188.x>
- Rasmy, A.H., Zaher, M.A. & Abou-Awad, B.A. (1972) Mites associated with deciduous fruit trees in U.A.R. *Zeitschrift für Angewandte Entomologie*, 70, 179–183.
<http://dx.doi.org/10.1111/j.1439-0418.1972.tb02167.x>
- Ribaga, C. (1904) Gamasidi planticoli. *Rivista di Patologia Vegetale*, 10, 175–178.
- Rivnay, T. & Swirski, E. (1980) Four new species of phytoseiid mites (Acarina: Mesostigmata) from Israel. *Phytoparasitica*, 8, 173–187.
<http://dx.doi.org/10.1007/bf03158314>
- Romeih, A.H.M., Hassan, M.F., Rizk, M.A. & Abo-Shnaf, R.I.A. (2005) Description and life history of *Typhlodromus citri* Hassan & Romeih sp. n. (Acari: Phytoseiidae). *Egyptian Journal of Biological Pest Control*, 15, 49–56.
- Romeih, A.H.M., Abo-Shnaf, R.I.A., Hassan, M.F. & Rizk, M.A. (2010a) Description of a new phytoseiid mite species (Acari: Phytoseiidae) from Egypt with a special reference to its biology. *Egyptian Academic Journal of Biological Sciences*, 3 (2), 27–36. [The first International Conference of Biological Sciences, 27–29–September, 2010 Cairo—Egypt]
- Romeih, A.H.M., Hassan, M.F., Rizk, M.A. & Abo-Shnaf, R.I.A. (2010b) Egyptian checklist of mites from aromatic, medicinal and ornamental plants. *Acarines: Journal of the Egyptian Society of Acarology*, 4, 37–46.
- Rowell, H.J., Chant, D.A. & Hansell, R.I.C. (1978) The determination of setal homologies and setal patterns on the dorsal shield in the family Phytoseiidae (Acarina: Mesostigmata). *Canadian Entomologist*, 110, 859–876.
- Saber, S.A. & Momen, F.M. (2003) Development, reproduction and life table of the predacious mite, *Amblyseius zaheri* Yousef & El-Borolossy (Acarina: Phytoseiidae) reared on three host plants. *Egyptian Journal of Biological Pest Control*, 13, 7–11.
- Scheuten, A. (1857) Einiges über Milben. *Archiv für Naturgeschichte*, 23, 104–112.
- Schicha, E. (1975) A new predacious species of *Amblyseius* Berlese from strawberry in Australia, and *A. longispinosus* (Evans) redescribed (Acari: Phytoseiidae). *Journal of the Australian Entomological Society*, 14, 101–106.
<http://dx.doi.org/10.1111/j.1440-6055.1975.tb02010.x>
- Schicha, E. (1976) The undescribed male of *Amblyseius bellinus* (Womersley), and females of the latter and *A. cucumeris* (Oudemans) redescribed (Acarina: Phytoseiidae). *Zeitschrift für Angewandte Zoologie*, 63, 333–342.
- Schicha, E. (1983) New species, new records, and redescription of phytoseiid mites from Australia, Tahiti, and the African region (Acari: Phytoseiidae). *International Journal of Entomology*, 25, 103–126.
- Schicha, E. (1987) *Phytoseiidae of Australia and Neighboring Areas*. Indira Publishing House, Michigan, USA, 187 pp.
- Schicha, E. & Corpuz-Raros, L.A. (1992) *Phytoseiidae of the Philippines*. Indira Publishing House, West Bloomfield, Michigan, USA, 190 pp.
- Schultz, F.W. (1972) Three new species of the family Phytoseiidae (Acari: Mesostigmata) from South Africa. *Phytophylactica*, 4, 13–18.
- Schuster, R.O. & Gonzalez, R.H. (1963) Redescription and notes on *Amblyseius cucumeris* (Oudemans) (Acarina: Phytoseiidae). *Acarologia*, 5, 185–188.
- Schuster, R.O. & Pritchard, A.E. (1963) Phytoseiid mites of California. *Hilgardia*, 34 (7), 191–285.
- Schuster, R.O. & Smith, L.M. (1960) The spermathecae as taxonomic features in phytoseiid mites of western North America (Acarina: Phytoseiidae). *Proceedings of the Entomological Society of Washington*, 62, 181–188.
- Shehata, K.K. & Zaher, M.A. (1969) Two new species of genus *Amblyseius* in the U.A.R. (Acarina - Phytoseiidae). *Acarologia*, 11, 175–179.
- Spain, A.V. & Luxton, M. (1971) Catalog and bibliography of the Acari of the New Zealand subregion. *Pacific Insects Monograph*, 25, 179–226.
- Specht, H.B. (1968) Phytoseiidae (Acarina: Mesostigmata) in the New Jersey apple orchard environment with descriptions of spermathecae and three new species. *Canadian Entomologist*, 100, 673–692.
<http://dx.doi.org/10.4039/ent100673-7>
- Swirski, E. & Amitai, S. (1961) Some phytoseiid mites (Acarina: Phytoseiidae) of Israel, with a description of two new species. *Israel Journal of Agricultural Research*, 11, 193–202.
- Swirski, E. & Amitai, S. (1965) Further phytoseiid mites (Acarina: Phytoseiidae) of Israel, with a description of one new species. *Israel Journal of Agricultural Research*, 15, 123–138.
- Swirski, E. & Amitai, S. (1985) Notes on phytoseiid mites (Mesostigmata: Phytoseiidae) from the Dead Sea region of Israel. *Israel Journal of Entomology*, 19, 181–192.
- Swirski, E. & Amitai, S. (1990) Notes on phytoseiid mites (Mesostigmata: Phytoseiidae) from the Sea of Galilee region of Israel, with a description of a new species of *Amblyseius*. *Israel Journal of Entomology*, 24, 115–124.
- Swirski, E. & Ragusa, S. (1976) Notes on predacious mites of Greece, with a description of five new species (Mesostigmata: Phytoseiidae). *Phytoparasitica*, 4, 101–122.

<http://dx.doi.org/10.1007/bf02980341>

- Swirski, E. & Ragusa, S. (1977) Some predacious mites of Greece, with a description of one new species (Mesostigmata: Phytoseiidae). *Phytoparasitica*, 5, 75–84.
<http://dx.doi.org/10.1007/bf02981145>
- Swirski, E., Ragusa Di Chiara, S. & Tsolakis, H. (1998) Keys to the phytoseiid mites (Parasitiformes, Phytoseiidae) of Israel. *Phytophaga*, 8, 85–154.
- Swirski, E., Ragusa, S., Van Emden, H. & Wysoki, M. (1973) Description of immature stages of three predaceous mites belonging to the genus *Amblyseius* Berlese (Mesostigmata: Phytoseiidae). *Israel Journal of Entomology*, 8, 69–87.
- Tenorio, J.M., Denmark, H.A. & Swift, S.F. (1985) Catalog of Acari in the Hawaiian Islands. I. Mesostigmata (or Gamasida) (Acari). *International Journal of Entomology*, 27, 297–309.
- Tixier, M.-S., Baldassar, A., Duso, C. & Kreiter, S. (2013) Phytoseiidae in European grape (*Vitis vinifera* L.): bio-ecological aspects and keys to species (Acari: Mesostigmata). *Zootaxa*, 3721 (2), 101–142.
<http://dx.doi.org/10.11646/zootaxa.3721.2.1>
- Tixier, M.-S., Guichou, S. & Kreiter, S. (2008) Morphological variation in the biological control agent *Neoseiulus californicus* (McGregor) (Acari: Phytoseiidae): consequences for diagnostic reliability and synonymies. *Invertebrate Systematics*, 22, 453–469.
<http://dx.doi.org/10.1071/is07052>
- Tseng, Y.H. (1975) Systematics of the mite family Phytoseiidae from Taiwan, with a revised key to genera of the world (I). *Journal of the Agricultural Association of China*, New Series, 91, 45–68.
- Tseng, Y.H. (1983) Further study on phytoseiid mites from Taiwan (Acarina: Mesostigmata). *Chinese Journal of Entomology*, 3, 33–74.
- Tuovinen, T. (1993) Identification and occurrence of phytoseiid mites (Gamasina: Phytoseiidae) in Finnish apple plantations and their surroundings. *Entomologica Fennica*, 4, 95–114.
- Ueckermann, E.A. (1992) Some Phytoseiidae of the Cape Verde Islands (Acari: Mesostigmata). *Phytophylactica*, 24, 145–155.
- Ueckermann, E.A. & Loots, G.C. (1988) The African species of the subgenera *Anthoseius* De Leon and *Amblyseius* Berlese (Acari: Phytoseiidae). *Entomology Memoir, Department of Agriculture and Water Supply, Republic of South Africa*, 73, 1–168.
- Van der Merwe, G.G. (1965) South African Phytoseiidae (Acarina). I. Nine new species of the genus *Amblyseius* Berlese. *Journal of the Entomological Society of South Africa*, 28, 57–76.
- Van der Merwe, G.G. (1968) A taxonomic study of the family Phytoseiidae (Acari) in South Africa with contributions to the biology of two species. *Entomology Memoirs, South Africa Department of Agricultural Technical Services*, 18, 1–198.
- Vitzthum, H. (1940–1943) *Dr. H. G. Bronns Klassen und Ordnungen des Tierreichs. 5 Band: Arthropoda. IV. Abteilung: Arachnoidea. 5. Buch. Acarina*. Akademische Verlagsgesellschaft, Becker & Erler Kom. - Ges., Leipzig, 1011 pp.
- Wainstein, B.A. (1959) A new subgenus and species of the genus *Phytoseius* Ribaga, 1902 (Phytoseiidae, Parasitiformes). *Zoologicheskii Zhurnal*, 38, 1361–1365.
- Wainstein, B.A. (1960) New species and subspecies of the genus *Typhlodromus* Scheuten (Parasitiformes, Phytoseiidae) of the USSR fauna. *Zoologicheskii Zhurnal*, 39, 683–690.
- Wainstein, B.A. (1961) New species of mites of the genus *Typhlodromus* (Parasitiformes: Phytoseiidae) in Georgia. *Trudy Instituta Zoologii Akademii Nauk Gruzinskoy SSR*, 18, 153–162.
- Wainstein, B.A. (1962a) Some new predatory mites of the family Phytoseiidae (Parasitiformes) of the USSR fauna. *Entomologicheskoe Obozrenie*, 41, 230–240. [in Russian, English translation in: *Entomological Review*, 41, 139–146.]
- Wainstein, B.A. (1962b) Révision du genre *Typhlodromus* Scheuten, 1857 et systématique de la famille des Phytoseiidae (Berlese, 1916) (Acarina: Parasitiformes). *Acarologia*, 4, 5–30.
- Wainstein, B.A. (1969) Two new species of *Phytoseius* (Parasitiformes, Phytoseiidae). *Zoologicheskii Zhurnal*, 48, 1741–1743.
- Wainstein, B.A. (1970) On the system of the genus *Phytoseius* Ribaga (Parasitiformes, Phytoseiidae). *Zoologicheskii Zhurnal*, 49, 1726–1728.
- Wainstein, B.A. (1973) Systematic status of the genus *Evansoseius* Sheals in the family Phytoseiidae (Parasitiformes). *Zoologicheskii Zhurnal*, 52, 274–277.
- Wainstein, B.A. (1976) A new tribe of the family Phytoseiidae (Parasitiformes). *Zoologicheskii Zhurnal*, 55, 696–700.
- Wainstein, B.A. (1977a) A contribution to the fauna of the family Phytoseiidae (Parasitiformes) in Australia. *Zoologicheskii Zhurnal*, 56, 1413–1416.
- Wainstein, B.A., (1977b) Family Phytoseiidae Berlese, 1916. In: Ghilarov, B.M. (Ed.), *Key to Soil-Inhabiting Mites (Mesostigmata)*. Ed. "Nauka", Leningrad, pp. 227–244.
- Wainstein, B.A. & Abbasova, E.D. (1974) Two new species of the genus *Amblyseius* (Parasitiformes: Phytoseiidae) from Azerbaijan. *Zoologicheskii Zhurnal*, 53, 796–798.
- Wainstein, B.A. & Arutunjan, E.S. (1967) New species of predatory mites from the genera *Typhlodromus* Scheuten and *Paraseiulus* Muma (Parasitiformes, Phytoseiidae). *Zoologicheskii Zhurnal*, 46, 1764–1770.
- Wainstein, B.A. & Arutunjan, E.S. (1968) New species of predaceous mites of the genus *Typhlodromus* (Parasitiformes, Phytoseiidae). *Zoologicheskii Zhurnal*, 47, 1240–1244.
- Wainstein, B.A. & Arutunjan, E.S. (1970) New species of predaceous mites of the genera *Amblyseius* and *Phytoseius* (Parasitiformes, Phytoseiidae). *Zoologicheskii Zhurnal*, 49, 1497–1504.
- Wainstein, B.A. & Vartapetov, S.G. (1973) Predatory mites of the family Phytoseiidae (Parasitiformes) of Adzharskaya ASSR.

- Akademiya Nauk Armyanskoy SSR, Biologicheskii Zhurnal Armenii*, 26, 102–105.
- Westerboer, I. & Bernhard, F. (1963) Die Familie Phytoseiidae Berlese 1916. In: Stammer, H. (Ed.), *Beiträge zur Systematik und Ökologie Mitteleuropäischer Acarina. Band II, Mesostigmata I*. Akademische Verlagsgesellschaft, Geest and Portig K.-G., Leipzig, pp. 451–791.
- Willmann, C. (1949) Beiträge zur Kenntnis des Salzgebietes von Ciechocinek. 1. Milben aus den Salzwiesen und Salzmooren von Ciechocinek an der Weichsel. *Veröffentlichungen Museum Bremen*, 14A, 106–135 + 141–142.
- Willmann, C. (1952) Die Milbenfauna der Nordseeinsel Wangerooge. *Veröffentlichungen Institut für Meeresforschung*, 1, 139–186.
- Womersley, H. (1954) Species of the subfamily Phytoseiinae (Acarina: Laelaptidae) from Australia. *Australian Journal of Zoology*, 2, 169–191.
<http://dx.doi.org/10.1071/zo9540169>
- Wu, W.N. (1984) Notes on the genus *Amblyseius* Berlese with descriptions of two new species from citrus orchards in south China (Acarina: Phytoseiidae). In: Griffiths, D.A. & Bowman, C.E. (Eds.), *Acarology VI*. 1, Ellis Horwood Ltd., Chichester, United Kingdom, pp. 222–227.
- Wu, W.N. & Chou, F.W. (1981) A new species of *Amblyseius* (Acarina: Phytoseiidae) from Guangdong Province. *Zoological Research*, 2, 273–274.
- Wu, W.N., Liang, L.R. & Lan, W.M. (1997) Acari: Phytoseiidae [in Chinese]. *Economic Insect Fauna of China*, 53, 1–227. [Science Press, Beijing, China]
- Wysoki, M. & Bolland, H.R. (1983) Chromosome studies of phytoseiid mites (Acari: Gamasida). *International Journal of Acarology*, 9, 91–94.
<http://dx.doi.org/10.1080/01647958308683319>
- Wysoki, M. & Swirski, E. (1971) Studies on overwintering of predacious mites of the genera *Seiulus* Berlese and *Phytoseius* Ribaga in Israel (Acarina: Phytoseiidae). *Israel Journal of Entomology*, 6, 55–70.
- Xu, X., Wang, B., Wang, E. & Zhang, Z.-Q. (2013) Comments on the identity of *Neoseiulus californicus* sensu lato (Acari: Phytoseiidae) with a redescription of this species from southern China. *Systematic & Applied Acarology*, 18 (4), 329–344.
<http://dx.doi.org/10.11158/saa.18.4.3>
- Yoshida-Shaul, E. & Chant, D.A. (1983) Ontogenetic development of setae in two species groups in the genus *Typhlodromus* Scheuten (Acarina: Phytoseiidae). *International Journal of Acarology*, 9, 81–89.
<http://dx.doi.org/10.1080/01647958308683318>
- Yousef, A.T.A. (1974) A new genus of the family Phytoseiidae (Acarina: Parasitoidea). *Bulletin de la Société Entomologique d'Égypte*, 58, 381–383.
- Yousef, A.T.A. (1980) Morphology and biology of *Typhlodromus africanus* n. sp. (Acarina: Mesostigmata: Phytoseiidae). *Acarologia*, 22, 121–125.
- Yousef, A.T.A., El-Badry, E.A. & Heykal, I.H. (1976) Mites inhabiting cotton and associated weeds in Egypt (Acarina). *Bulletin de la Société Entomologique d'Égypte*, 60, 223–227.
- Zaher, M.A. (1986) *Survey and Ecological Studies on Phytophagous, Predaceous and Soil Mites in Egypt. II-A: Predaceous and Nonphytophagous Mites (Nile Valley and Delta)*. Text. PL 480 Programme U.S.A., Project No. EG-ARS-30, Grant No. FG-EG-139, 567 pp.
- Zaher, M.A. & El-Badry, E.A. (1962) Abundance of mites and insects predaceous on tetranychid and tenuipalpid mites in Giza. *Bulletin de la Société Entomologique d'Égypte*, 46, 429–441.
- Zaher, M.A. & Osman, A.A. (1970) Population studies on mites associated with mango trees in Egypt. *Bulletin de la Société Entomologique d'Égypte*, 54, 141–148.
- Zaher, M.A. & Shehata, K.K. (1969) Two new species of the genus *Typhlodromus* (Acarina: Phytoseiidae). *Bulletin of Entomology*, 10, 54–59.
- Zaher, M.A. & Shehata, K.K. (1970) A new typhlodromid mite *Typhlodromus tetramedius*. *Bulletin de la Société Entomologique d'Égypte*, 54, 117–121.
- Zaher, M.A. & Shehata, K.K. (1971) Biological studies on the predatory mite *Typhlodromus pyri* Sch. (Acarina Phytoseiidae) with the effect of prey and non prey substances. *Zeitschrift für Angewandte Entomologie*, 67, 389–394.
<http://dx.doi.org/10.1111/j.1439-0418.1971.tb02137.x>
- Zaher, M.A., Rasmy, A.H. & Abou-Awad, B.A. (1971) Ecological studies on mites infesting deciduous fruit trees in Lower Egypt. *Zeitschrift für Angewandte Entomologie*, 69, 59–64.
<http://dx.doi.org/10.1111/j.1439-0418.1971.tb03183.x>
- Zaher, M.A., Soliman, Z.R. & El-Safi, G.S. (1973) Survey and population studies on mites associated with deciduous fruit trees in Giza, Egypt. *Bulletin de la Société Entomologique d'Égypte*, 57, 425–433.
- Zaher, M.A., Wafa, A.K., Ali, M.M. & Rasmy, A.H. (1970) Survey of mites associated with citrus trees in Egypt and Gaza Strip. *Bulletin de la Société Entomologique d'Égypte*, 54, 73–79.
- Zannou, I.D. & Hanna, R. (2011) Clarifying the identity of *Amblyseius swirskii* and *Amblyseius rykei* (Acari: Phytoseiidae): are they two distinct species or two populations of one species? *Experimental & Applied Acarology*, 53, 339–347.
<http://dx.doi.org/10.1007/s10493-010-9412-6>

- Zannou, I.D., Moraes, G.J.de, Ueckermann, E.A., Oliveira, A.R., Yaninek, J.S. & Hanna, R. (2006) Phytoseiid mites of the genus *Neoseiulus* Hughes (Acari: Phytoseiidae) from sub-Saharan Africa. *International Journal of Acarology*, 32, 241–276.
<http://dx.doi.org/10.1080/01647950608684467>
- Zannou, I.D., Moraes, G.J. de, Ueckermann, E.A., Oliveira, A.R., Yaninek, J.S. & Hanna, R. (2007) Phytoseiid mites of the subtribe Amblyseiina (Acari: Phytoseiidae: Amblyseiini) from sub-Saharan Africa. *Zootaxa*, 1550, 1–47.