





مدیریت تحصیلات تکمیلی
دانشکده کشاورزی
گروه گیاه پزشکی

پایان نامه جهت اخذ درجه دکتری در رشته حشره‌شناسی کشاورزی

مطالعه‌ی تاکسونومی پارازیتنگونای (Parasitengona) خشکی - زی انگل خارجی بندپایان در استان خراسان جنوبی

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چکیده

کنه‌های پارازیت‌نگونا، گروهی متنوع در راسته‌ی Trombidiformes و زیرراسته‌ی Prostigmata است. به منظور مطالعه‌ی تاکسونومی پارازیت‌نگونای خشکی‌زی از روش‌های مختلف نمونه برداری شامل مشاهده‌ی مستقیم، تورزنی، تله‌ی نوری، تله‌ی مالیز، تله‌ی گودالی و نمونه برداری و جداسازی آنها، با استفاده از کیف برلز در استان خراسان جنوبی در طول سال‌های 1399 تا 1401 استفاده شد. با لاکتوفنل، لاروها شفاف و با هویر، اسلاید میکروسکوپی تهیه شد. در مجموع تعداد 35 گونه متعلق به 20 جنس از 10 زیرخانواده، 9 خانواده و 2 بالاخانواده شناسایی شدند. یک جنس جدید برای خانواده‌ی Neothrombiidae به همراه میزبان جدیدی از کنه‌ی دامی (Acari: Tick: دامی) *Rhipicephalus sanguineus* (Ixodidae) شناسایی شد. پنج گونه‌ی جدید برای فون دنیای علم (با علامت *) و پنج گونه برای اولین بار از ایران (با علامت **) گزارش شدند:

Superfamily Erythraeoidea: Family Erythraeidae Robineau-Desvoidy, 1828: Subfamily Erythraeinae Robineau-Desvoidy, 1828: *Erythraeus (Erythraeus) shojaii* Saboori & Babolmorad, 2000, *E. (E.) garmsaricus* Saboori, Goldarazena & Khaieali, 2004, *E. (E.) uhadi* Kamran & Alatawi, 2014**, *E. (E.) sifi* Haitlinger, 2000**, *E. (Zaracarus) coleopterus* Mortazavi, Hajiqanbar & Saboori, 2012, *E. (Z.) lancifer* Southcott, 1995, *E. (Z.) hafezi* Saboori, Hakimitabar & Mahmoudi, 2014, *E. (Z.)* sp. nov. * and *Lasioerythraeus* sp. nov. *; Subfamily Abrolophinae Witte, 1995: *Abrolophus hajiqanbari* Noei, 2022, *Marantelophus iranicus*, (Haitlinger and Saboori, 1996); Subfamily Callidosomatinae Southcott, 1957: *Charletonia damavandica* Karimi Iravanlou, Kamali et Talebi, 2002, *C. terianae* Hakimitabar, Saboori & Seiedy, 2013, *C. volzi* (Oudemans, 1910) ** and *Caeculisoma* sp. nov. *; Subfamily Leptinae Billberg, 1820: *Leptus (Leptus) heleus* Southcott, 1993**, *L. (L.) polythrix* Fain & Elsen, 1987**, *L. (L.) phuketicus* Southcott, 1994, *L. (L.) augusti* Haitlinger, 1999; Family Smarididae Vitzthum, 1929: Subfamily Smaridinae Vitzthum, 1929: *Fessonina papillosa* (Hermann, 1804); Superfamily Trombidoidea: Family Trombidiidae incertae sedis: *Cicaditrombidium lorestanensis* Noei, 2017, *Oskootrombium prasadi* Saboori, Bagheri & Haddad, 2006; Subfamily Trombidiinae Leach, 1815: *Trombidium southcotti* Zhang et Saboori, 1996; Subfamily: Allothrombiinae Thor, 1935: *Allothrombium pulvinum* Ewing, 1917, *A. triticium* Zhang, 1995, *Monotrombium simplicium* Zhang, 1995; Family: Microtrombidiidae Thor, 1935: Subfamily Eutrombidiinae Thor, 1935: *Eutrombidium sorbasiensis* Mayoral & Barranco, 2004; Subfamily Microtrombidiinae Thor, 1935: *Atractothrombium brevisetosum* Karakurt and Sevsay, 2015, *Platyrombidium fasciatum* (C. L. Koch, 1836); Family Microtrombidiidae incertae sedis: *Empitrombium makolae* Sevsay & Karakurt, 2013; Family Achaemenothrombiidae Saboori, Wohltmann and Hakimitabar, 2010: *Achaemenothrombium saboorii* Noei, 2021, *A. khashayarshahi* Noei, 2022*; Family Trombellidae Thor, 1935: *Nothrotrombidium birjandensis* Noei, 2017, *Nothrotrombidium sadeghi* Noei and Kohansal, 2023*; Family Neothrombiidae Feider, 1959: *Dorohrtrombidium* gen. sp. nov.*.

کلید واژگان: لارو، فون، گونه، میزبان، خراسان جنوبی.

Taxonomic study of terrestrial Parasitengona ectoparasites on arthropod in South Khorasan province

Abstract

Parasitengona mites are a diverse group in the order Trombidiformes and suborder Prostigmata. In order, study of the taxonomy of terrestrial Parasitengona larve were used of different sampling methods including direct observation, netting, light trap, Malaise trap, pit fall trap, their separation of soil with Berlese funnels in South Khorasan province during years 2020 - 2022. The larvae became clear with Lactophenol and microscopic slides were prepared in Hoyer's medium. A total of 35 species belonging to 20 genera from 10 subfamilies, 9 families and 2 superfamilies were identified. A new genus of Neothrombiidae Feider, 1959 were identified with new host from ticks *Rhipicephalus sanguineus* (Acari: Tick: Ixodidae) was reported for first time. five new species for the world of science fauna (marked *) and five species were reported for the first time from Iran (marked **):

Superfamily Erythraeoidea: Family Erythraeidae Robineau-Desvoidy, 1828: Subfamily Erythraeinae Robineau-Desvoidy, 1828: *Erythraeus (Erythraeus) shojaii* Saboori & Babolmorad, 2000, *E. (E.) garmsaricus* Saboori, Goldarazena & Khaieali, 2004, *E. (E.) uhadi* Kamran & Alatawi, 2014**, *E. (E.) sifi* Haitlinger, 2000**, *E. (Zaracarus) coleopterus* Mortazavi, Hajiqanbar & Saboori, 2012, *E. (Z.) lancifer* Southcott, 1995, *E. (Z.) hafezi* Saboori, Hakimitabar & Mahmoudi, 2014, *E. (Z.)* sp. nov. * and *Lasioerythraeus* sp. nov. *; Subfamily Abrolophinae Witte, 1995: *Abrolophus hajiqanbari* Noei, 2022, *Marantelophus iranicus*, (Haitlinger and Saboori, 1996); Subfamily Callidosomatinae Southcott, 1957: *Charletonia damavandica* Karimi Iravanlou, Kamali et Talebi, 2002, *C. terianae* Hakimitabar, Saboori & Seiedy, 2013, *C. volzi* (Oudemans, 1910) ** and *Caeculisoma* sp. nov. *; Subfamily Leptinae Billberg, 1820: *Leptus (Leptus) heleus* Southcott, 1993**, *L. (L.) polythrix* Fain & Elsen, 1987**, *L. (L.) phuketicus* Southcott, 1994, *L. (L.) augusti* Haitlinger, 1999; Family Smarididae Vitzthum, 1929: Subfamily Smaridinae Vitzthum, 1929: *Fessonina papillosa* (Hermann, 1804); Superfamily Trombidoidea: Family Trombidiidae incertae sedis: *Cicaditrombidium lorestanensis* Noei, 2017, *Oskootrombidium prasadi* Saboori, Bagheri & Haddad, 2006; Subfamily Trombidiinae Leach, 1815: *Trombidium southcotti* Zhang et Saboori, 1996; Subfamily: Allothrombiinae Thor, 1935: *Allothrombium pulvinum* Ewing, 1917, *A. triticium* Zhang, 1995, *Monotrombidium simplicium* Zhang, 1995; Family: Microtrombidiidae Thor, 1935: Subfamily Eutrombidiinae Thor, 1935: *Eutrombidium sorbasiensis* Mayoral & Barranco, 2004; Subfamily Microtrombidiinae Thor, 1935: *Atractothrombium brevisetosum* Karakurt and Sevsay, 2015, *Platyrombidium fasciatum* (C. L. Koch, 1836); Family Microtrombidiidae incertae sedis: *Empitrombidium makolae* Sevsay & Karakurt, 2013; Family Achaemenothrombiidae Saboori, Wohltmann and Hakimitabar, 2010: *Achaemenothrombium saboorii* Noei, 2021, *A. khashayarshahi* Noei, 2022*; Family Trombellidae Thor, 1935: *Nothrotrombidium birjandensis* Noei, 2017, *Nothrotrombidium sadeghi* Noei and Kohansal, 2023*; Family Neothrombiidae Feider, 1959: *Dorohrtrombidium* gen. sp. nov.*.

Key words: Larve, Fauna, Species, Host, South Khorasan.



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