

**LEAF BEETLES (CHRYSOMELIDAE – COLEOPTERA)
OF SINAI PENINSULA
PART IV : SUBFAMILIES *CHRYSOMELINAE* AND *EUMOLPINAE***

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Abstract

Twenty seven species in eight genera from the two subfamilies under investigation were recorded in literature from Egypt, of which eight species not represented in the Egyptian collections and were obtained from Tel Aviv University Collection (TAU) and added to Plant Protection Research Institute Collection. These species are: *Chrysolina peregrina impavida* Bechyne, 1949, *Chrysolina chalcites* (Germar, 1824), *Chrysolina modesta angelica* (Reiche and Saulcy, 1858), *Chrysolina palmyrensis* Bechyne, 1955, *Chrysolina sahlbergi* (Ménétriés, 1832) and *Colaphellus palaestinus* Achard, 1923 from subfamily Chrysomelinae and *Macrocoma buettikeriana* Daccordi, 1979 and *Macrocoma saudica* L. Medvedev, 1979 from subfamily Eumolpinae.

INTRODUCTION

In Egypt, family Chrysomelidae is represented by 10 subfamilies (Alfieri, 1976). Only eight subfamilies: Alticinae, Cryptocephalinae, Clytrinae, Cassidinae, Criocerinae, Galerucinae, Chrysomelinae and Eumolpinae are represented in Sinai peninsula. Subfamily Alticinae is represented by 38 species including seven species were added (part I in press), Cryptocephalinae by 16 species from which two were added (part II in press), subfamilies Clytrinae, Cassidinae, Criocerinae and Galerucinae all represented by twenty three species including seven species were added (part III in press) in Sinai peninsula. Accordingly, the present study was planned to revise and update the leaf beetles of the subfamilies Chrysomelinae and Eumolpinae of Sinai Peninsula. Information for the species including references to the original description, synonyms, localities where the species were collected in Sinai Peninsula, their general distribution and host plants when available were provided. The most important works in Sinai and adjacent countries were published by: Marseul (1887 and 1888), Hart (1891), Heyden (1899), Pic (1909a, b, 1912a, b, 1921, 1923a, b, 1924), Medvedev (1996), Chikatunov (2000), Lopatin *et. al.* (2003), Medvedev (1996), Peyerimhoff (1907) and Warchalowski (1993 and 1994).

MATERIALS AND METHODS

The present work started by the examination of a number of authentic Egyptian insect reference collections: Collection of the Ministry of Agriculture, Plant Protection Research Institute (MAC), Collection of the Egyptian Entomological Society (EESC), Collection of the Faculty of Science, Cairo University (CUC), Collection of the Faculty of Science, Ain Shams University (ASUC) and Collection of Alfieri, Al-Azhar University, Faculty of Agriculture (ALFC) for chrysomelid beetles. In addition to, Collection of National Museum of Natural History U.S.A. (USNM), Tel Aviv University Collection (TAU). In general, the specimens of chrysomelid species were collected either directly by hand from the host plants and by sweeping vegetation or indirectly using light traps fixed in different regions. The collected specimens were preserved in the A. El-Torkey Collection (ATC). Specimens of other species were available from various Egyptian insect collections. Species confined in Egypt to Sinai are characterized by an astrisk.

RESULTS

Subfamily Chrysomelinae Latreille, 1802

(Broad-Bodied leaf beetles)

Chrysolina (Diachalcoidea) aegyptiaca (Olivier, 1807)

Chrysomela aegyptiaca Olivier, 1807, Ent. V : 528, t. 6, f. 88.

Material examined: Three specimens.

Wadi Gebal (6-3-1999) {3, ATC}.

World distribution : Egypt, Libya, Israel, Lebanon, Palestine and Syria.

Chrysolina (Bittotaenia) aeneipennis (Reiche, 1858)

Chrysomela aeneipennis Reiche, 1858, Ann. Soc. Ent. France, IV : 328 .

Chrysomela aeneipennis var. *derelicta* Marseul, 1887, L.Abeille, Ser. 4, 24: 84.

Chrysomela subcoerulea Sahlberg, 1913, Öfv. Finska Vet. Soc. Förh., 55, A, 19: 246

Chrysomela tripolitanica Bechyné, 1950, Ent. Arbeit. Mus. G. Frey, 1: 178

Material examined: 17 specimens.

Metla Road (2-3-1999), Wadi Gebal (6-3-1999), Wadi El-Haga (10-3-1999) {17, ATC}.

World distribution : Egypt, Asia Minor, Israel, Lebanon, Palestine and Syria.

Chrysolina (Centoptera) bicolor (Fabricius, 1775)

Chrysomela bicolor Fabricius, 1775, Syst. Ent. : 95.

Chrysomela canariensis Brulle, 1838, Histoire naturelle des Iles Canaries, 2, 2. Paris: 73.

Chrysomela consularis Erichson, 1841, Wagn. Reise III : 190.

Chrysomela dolorosa Fairmaire, 1873, : 359.

Chrysomela lusitanica Gmelin, 1790: 1688 nec Fabricius, 1781, Hamburgi et Kilonii, Bohn: 116.

Chrysomela marseuli Kocher, 1958 nec Weise, 1898: 200.

Chrysomela mima Marseul, 1887, L'Abeille, Ser. 4, 24: 99.

Chrysomela nigropunctata Reitter, 1872, Berl. Ent. Zeitschr. 16: 175.

Chrysomela regalis Olivier, 1807, Entomologie. 5. Paris.: 538.

Chrysomela scovitzii Menetries, 1832, Cat. Rais. : 235.

Chrysomela scovitzii Weise, 1916, Coleop. Catalogus, 68, Berlin, W. Junk : 61.

Material examined : Six specimens.

El-Sateh (El-Arish) (4-5-2001) {6, ATC}.

World distribution : Mediterranean basin.

Chrysolina (Bittotaenia) brancuccii* Daccordi, 1982

Crosita brancuccii Daccordi, 1982, Entomologica Basiliensia, 7: 406.

World distribution : Egypt, Oman.

Remark : This species was recorded from Sinai, Egypt (Daccordi, 1982).

Chrysolina (Sulcicollis) chalcites* (Germar, 1824)

Chrysomela chalcitis Germar, 1824, Halae, XXIV : 587

Chrysomela chalcitis Suffrian, 1851, Linn. Ent., 5 : 121.

Chrysomela festiva Menetries, 1832, Cat. Rais. : 235.

Material examined: Two specimens.

Israel : Adullam (18-1-2002) [Y. Mandelik] {2, ATC}.

World distribution : Egypt, Dagestan, Europe, Israel, Palestine and Syria.

Remark : This species was recorded from Metla (Sinai, Egypt) (Lopatin, 2003).

Chrysolina (Bittotaenia) grata* (Faldermann, , 1837)

Chrysomela grata Faldermann, 1837, No. Mem. Mosc. V, 1837 : 361.

Material examined: Nine specimens.

Wadi Isla (28-2-1933) {1, MAC}. Wadi El-Rabaa (18-4-1940), Bir Isla (6-4-1940),

Karm Alam (15-4-1940) {3, ALFC}. Wadi El-Lega (3-8-1943) {3, CUC}. Wadi El-

Gedeirat (22-5-2004), Wadi Isla (22-3-1969) [Kugler] {2, ATC}.

World distribution : Egypt, Afghanistan, C. Asia, Caucasus and Iran

Host Plant: *Mentha silvestris* L.

***Chrysolina (Stichoptera) gypsophilae* (Küster, 1845)**

Chrysomela gypsophilae Küster, 1845, Kaef. Eur. II : 71.

Material examined: Two specimens.

Wadi El-Haga (10-3-1999) {2, ATC}.

World distribution : Egypt, Europe, Israel and Syria

Chrysolina (Chalcoidea) hyrcana* (Weise, 1884)

Chrysomela hyrcana Weise, 1884, Naturgesch. Ins. Deut., Coleoptera, 6, 3 : 389.

Chrysomela chalybea Brancsik, 1899, Jahr. Naturwiss. Ver. Trenscen, 21-22 : 103.

Chrysomela cyanescens Jacobson, 1894, Horae Soc. ent. Ross., 28 : 159.

World distribution : Egypt, South and East Europe, Russia , North and East. Turkey, North and West Iran, Armenia, Azerbaijan, Kazakhstan.

Remark : This species was recorded from Sinai, Egypt (Alfieri, 1976).

Chrysolina (Bittotaenia) leonrdii (Daccordi, 1976)*

Crosita (Bittotaenia) leonrdii Daccordi, 1976, Atti Soc. ital. Sci. nat. Museo civ. Stor. nat. Milano, 117, 1-2 : 79.

World distribution : Egypt.

Remark : This species was recorded from Wadi Isla (Sinai, Egypt) (Lopatin, 2003).

Chrysolina (Chrysolina) marginata sanguineocincta (Crotch, 1871)

Chrysomela sanguineocincta Crotch, 1871, Ordnance Surv. Penins. Sinai XI, Zool. 2 : 268

Material examined: 23 specimens.

Sinia (Mai) {1, EESC}. Bir Isla (6-4-1940), Wadi Um Metla (12-3-1937, 26-5-1935, 8-5-1938) {14, ALFC}. Wadi Arbein (19-4-1939) {1, CUC}. Wadi Um Metla (26-5-1925) {5, MAC}. Wadi Um Metla (6-3-1999), Israel : En Avedat (30 -3- 2004) [L. Friedman] {3, ATC}.

World distribution : Egypt, Iran, Iraq, Israel and Syria.

Chrysolina (modesta) angelica (Reiche and Saulcy, 1858)*

Chrysolina angelica Reiche, 1858, Ann. Soc. Ent. France, (3) VI : 33, t. 1, f. 8.

Material examined: Two specimens.

Israel : Shammay (30-9-1975) [M. Kaaplan], Deir (3-4-1993) [V. Chikatunov] {2, ATC}.

World distribution : Egypt, Israel, Palestine and Syria.

Remark : This species was recorded from Mt. Catherin (Sinai, Egypt) (Lopatin, 2003).

Chrysolina (Paradiacha Icoidea) palmyrensis Bechyne, 1955*

Chrysolina (Diacha Icoidea) palmyrensis Bechyne, 1955, Bull. Res.ounc. Israel, 4 : 350.

Material examined: One specimen.

Israel : Shaman (15-3-2005) [L. Friedman] {1, ATC}.

World distribution : Egypt, Israel, Jordan and Lebanon.

Remark : This species was recorded from Mt. Catherin and Metla (Sinai, Egypt) (Lopatin, 2003).

Chrysolina (Sulcicollis) peregrina impavida Bechyne, 1949*

Chrysolina (Sulcicollis) peregrina impavida Bechyne, 1949 Listy, 12 : 54.

Material examined: One specimen.

Israel : Shaman (15-3-2005) [L. Friedman] {1, ATC}.

World distribution : Egypt, Asia Minor, Israel, Jordan and Rhodes.

Remark : This species was recorded from Sinai (Egypt) (Chikatunov, 2000).

Chrysolina (Ovosoma) sahlbergi (Ménétriés, 1832)*

Chrysolina sahlbergi Ménétriés, 1832, Cat. Rais. : 235.

Material examined: One specimen.

Israel : Damon (29-4-1997) [R. Hoffman] {1, ATC}.

World distribution : Egypt, Caucasus, Cyprus, Iran, Israel, Lebanon, Syria and Turkey.

Remark : This species was recorded from Mt. Catherin and Metla (Sinai, Egypt) (Lopatin, 2003).

Colaphellus apicalis* Menetries, 1849

Colaphus apicalis Menetries, 1849, Mem. Ac. Petersb. VI : 270.

Material examined: 25 specimens .

Wadi Um Metla (21-3-1937) {3, MAC}. Sinia (Mai) {1, EESC}. Wadi Um Metla (6-3-1999) {21, ATC}.

World distribution : Egypt, Central Asia, Circum Mediterranean, Iran and Israel.

Colaphellus pulchellus pulchellus* Lucas, 1849

Colaphus pulchellum Lucas, 1849, Expl. Soc. Ent. d'Algier : 517, t.46, f.4.

Material examined: Two specimens.

Wadi Um Metla (12-3-1937) {1, ALFC}. Wadi Um Metia (6-3-1999) {1, ATC}.

World distribution : Egypt and Algeria.

***Colaphellus palaestinus* Achard, 1923[†]**

Colaphus palaestinus Achard, 1923, Fragm. ent., fasc. 2 : 49-126.

Material examined: Two specimens.

Israel : Makhtesh Gadól near Yeroham [L. Friedman] (1-4-2001) {2, ATC}.

World distribution : Egypt, Israel and Palestine.

Remark : This species was recorded from Metla (Sinai, Egypt) (Lopatin, 2003).

Entomoscelis cornea* Abeille, 1898

Entomoscelis cornea ABEILLE, 1898, Bull. Soc. Ent. Fr. : 43.

Material examined : Two specimens.

Sinai (March) {1, MAC}. El-Sateh (El-Arish) (4-5-2001) {1, ATC}.

World distribution : Egypt, Algeria.

***Entomoscelis sacra* (Linnaeus, 1758)[†]**

Chrysomela sacra Linnaeus, 1758, Syst. Nat. ed. 10 : 372.

Material examined : Two specimens.

El-Sateh (El-Arish) (4-5-2001), Israel: Ma'ale Adumim (18-4-1990) [Yoram Zvik] {2, ATC}.

World distribution : Egypt and Eastern Mediterranean.

***Plagiodesa versicolor* (Laicharting, 1781)**

Chrysomela versicolora Laicharting, 1781, Syst. Nat. ed. 10 : 372.

Chrysomela armoraciae Fabricius, 1775, nec Linnaeus, 1758- *Chrysomela versicolora* Laicharting, 1781.

Material examined : One specimen

Wadi Um Metla (6-3-1999) {1, ATC}.

World distribution : Egypt, Holarctic Region, Pakistan and Taiwan.

Subfamily Eumolpinae Hope, 1840

(Oval leaf beetles)

***Chloropterus bimaculatus* (Raffray, 1873)**

Nodostoma bimaculatus Raffray, 1873, Rev. Mag. Zool., (3) I : 385.

Material examined : Five specimens.

Sant Catherin, July (2000), on *Francoeuria crispa* (Forssk.) {5, ATC}.

World distribution : Egypt, Algeria.

***Euryope rubra* (Latreille, 1807)**

Eumolpus rubra Latreille, 1807, Gen. Crust. Inst., 3 : 56.

Eumolpus quadrimaculata Olivier, 1808, Ent., VI : 905, t.1, f.14.

Ecranus nigripes Walker, 1871, List Col. Coll. Lord. : 19.

Eumolpus rubra (Latreille): Bryant, 1957, Ann. and Mag. Nat. Hist., 10 (12): 354.

Material examined : Six specimens.

Gabal Serbal, May (2000), on *Francoeuria crispa* (Forssk.) {6, ATC}.

World distribution : Egypt, South and West Africa, Saudi Arabia and South Yemen.

Macrocoma brunnipes* (Olivier, 1808)

Eumolpus brunnipes Olivier, 1808, Ent., VI : 913, t. 2, f. 26.

Macrocoma variabilis Schauf, 1871, Nauq. Otios., I : 202.

Macrocoma cyanea Reffray, 1873, Rev. Mag. Zool., (3) I : 384.

Pseudocolaspis brunnipes Lefevre, 1876, L'Abeille, XIV : 7.

Macrocoma brunnipes ab. *obscuricolor* Pic, 1905, L'Echange, 21 : 179.

Macrocoma brunnipes ab. *mogadorensis* Pic, 1912, Bull. Mus. Paris : 220.

Material examined : . One specimen.

Israel : Dan (3-6-1993) [V. Chikatunov] {1, ATC}.

World distribution : Egypt, Morocco, Palestine and Iraq. *

Remark : This species was recorded during May, from Sinai, Egypt on *Artemisia Judaica* L. (Alfieri, 1976).

Macrocoma buettikeriana* Daccordi, 1979

Macrocoma buettikeriana Daccordi, 1979, BolI. Mus. civ. Storia nat., 6: 305.

Material examined : . Two specimens.

Israel : Ne'ot-Hakikkar (13-8-1999) [I. Yarom and V. Kravchenko] Light trap, Israel Ne'ot-Hakikkar (13-10-1999) [I. Yarom and V. Kravchenko] Light trap {2, ATC}.

World distribution : Egypt and Israel.

Remark : This species was recorded from Wadi Tinia (Sinai, Egypt) (Lopatin, 2003).

***Macrocoma leprieuri* (Lefevre, 1876)**

Pseudocolaspis leprieuri Lefevre, 1876, L'Abeille, 14, p. 6.

Pseudocolaspis millingeni Pic, 1898, Misc. Ent., 6 : 154.

Macrocoma leprieuri (Lefevre) : Shalaby, 1961, Bull. Soc. Ent. Egypt, 45 : 226.

Material examined : 75 specimens.

Sinai, May (1935) {58, MAC}. Wadi El-Gedeirat, May (1935) {11, ALFC}. Wadi El-Gedeirat, May (1999), on *Mentha microphylla* Koch, Gabal Serbal, May (2000), on *Francoeuria crispa* (Forssk.), Wadi Firan, May (2001), on *Acacia nilotica* (L.) {6, ATC}.

World distribution : Egypt, Algeria, Saudi Arabia and North Yemen.

Macrocoma saudica* L. Medvedev, 1979

Macrocoma saudica L. Medvedev, 1979, Fauna of Saudi Arabia I : 247.

Material examined : . Two specimens.

Israel : Ne'ot-Hakikkar (11-9-1999) [I. Yarom and V. Kravchenko] Light trap, Israel-Gerofit (4-5-2003) [D. Ushitel] {2, ATC}.

World distribution : Egypt, Israel and Saudi Arabia.

Remark : This species was recorded from Ein Shaar, Mt. Abbas, Mt. Helal, Mt. Catherina, Nuweiba, Wadi Ahmar and Wadi Tlach (Sinai, Egypt) (Lopatin, 2003).

***Pachnephorus bistratus* Mulsant, 1852**

Pachnephorus bistratus Mulsant, 1852, Mem. Acad. Lyon, (2) II, p. 17.

Pachnephorus impressus Rosenhauer, 1856, Thiere Andal. : 310.

Pachnephorus convexicollis Baly, 1867, Trans. Ent. Soc. London, (3) IV : 95.

Material examined : Four specimens.

Ain El-Gedeirat, May (1999), on *Mentha microphylla* Koch {4, ATC}.

World distribution : Egypt, Africa, Madagascar, south Europe and Philippen.

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خنافس الأوراق (كريزوميلىدى - غمدية الأجنحة) فى شبة جزيرة سيناء
الجزء الرابع : فصيلات كريزوميلىنى و إيموليبنى

أشرف محمد عبد الحليم التركى

معهد بحوث وقاية النباتات - مركز البحوث الزراعية

تم خلال هذه الدراسة تسجيل ثمانية أنواع غير ممثلة فى المجموعات المرجعية المصرية من أصل سبعة و عشرون نوعا فى الفونة المصرية و الممثلة للفصيلتين موضوع الدراسة. هذه الأنواع هى: كريزولينا بريجرينا إيمافيدا، كريزولينا كالكتيس، كريزولينا مودستا انجيلكا، كريزولينا بالميرينسس، كريزولينا ساهلبيرج، كولافيليس بالسستينيس و ماكروكوما بيوتيكيريانا و ماكروكوما سوديكا. و قد تم الحصول على عينات من الأنواع الثمانية الأولى عن طريق التبادل العلمى بين مجموعة جامعة تل أبيب و المجموعة الحشرية المصرية بمعهد بحوث وقاية النباتات و تم إضافتها فى المجموعة المصرية الحشرية المرجعية بمعهد بحوث وقاية النباتات.