

A list of some Chrysomelinae (Col., Chrysomelidae) from Turkey. Part II. *Colaphellus*, *Gastroidea*, *Phaedon*, *Prasocuris*, *Plagiodera*, *Melasoma*, *Phytodecta*, *Phyllodecta*, *Timarcha*, *Entomoscelis*

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Summary

Overall 18 species of 10 genera collected in Central Anatolia were comparatively studied with the samples gathered from other parts of Turkey. Identification keys were provided for the genera having over one species, *Phaedon*, *Melasoma*, *Phyllodecta* and *Entomoscelis* in Central Anatolia. Most of the localities are new records to the distribution of species and *Phyllodecta tibialis* Suffr. is new to Turkey.

Introduction

Most of the material examined here were collected by the author in Central Anatolia. The species represented in Central Anatolia were also studied for the material collected from different localities in Turkey and deposited in collectins of the author, Dr. O. Tokmakoglu, Sugar Institute in Ankara and Natural History Museum of Munich, Prague and Paris.

Nomenclature, taxonomic status, synonyms and order of taxa were given according to the catalogues by Heyden et al. (1906), Weise (1916) and Winkler (1932). General distribution, previous records from Turkey where locality names were up-dated, records of new materials and notes of occurrence were included. Specimens were usually collected by a sweeping net and identified host plants were given.

Abbreviations used for repositories of materials are as following:

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HK: Halil Kasap, University of Çukurova, Adana; MZS: Zoological State Museum, Munich; MNP: National Natural History Museum, Prague; PM: National History Museum, Paris; OT: Orhan Tokmakoğlu, Sugar Institute, Ankara.

Colaphellus sophiae (Schaller, 1783)

Locus typicus: Not known.

Synonymy: Chrysomela rufipes Herbst, 1783; Chrysomela erythropus Gmelin, 1790.

Distribution: Europe and Turkey (Weise, 1916; Winkler, 1932; Machatschke, 1954). Previous records from Turkey: Edirne, Istanbul, Efes, Izmir, Çubuk and Kızılcahamam (Ankara), Amasya (Sahlberg, 1913; Machatschke, 1954; Tomov and Gruev, 1975).

Material examined: Gölbaşı, Gıcık Köyü, Atatürk Orman Çiftliği, Ayaş (Ankara), 20.4-29.5.1977 12 exs.; Atatürk Orman Çiftliği, Etimesgut (Ankara), 13.3-16.4.1978 15 exs.; Ankara-Konya High Way 60. km 19.5.1979 1 ex.; Yerköy-Sekili (Yozgat), 7.5.1978 6 exs.; Boğazlıyan (Yozgat), 21.5.1978 1 ex.; Nevşehir, 2.5.1978 1 ex.; Aksaray (Niğde), 19.5.1978 2 exs.; 6.5.1979 3 exs.; Sarioğlan (Kayseri), 22.5.1978 1 ex.; Konya Harası 27.4.1978 8 exs.; Çifteler Harası, 17.5.1979 3 exs.; (HK). Konya, 1899 leg. Korb 3 exs.; Akşehir (Konya), 1899 leg. Korb 3 exs.; Amasya, 1899 leg. Korb 9 exs.; Kayseri, 10-11.6.1967 11 exs., (MZS).

Occurrence: Common. It is found usually in large numbers on Descuiriana sp., Lepidium latifolium and Sysimbrium sp., so the material examined was sampled for recording the localities only.

Gastroidea polygona (Linnaeus, 1758)

Locus typicus: Europe

Synonymy: Chrysomela ruficollis Fabricius, 1781; Chrysomela coeruleipennis Say, 1825.

Distribution: N. America, Europe, Siberia (Weise, 1916; Winkler, 1932). Previous records from Turkey: Edirne, Engiz (Samsun), Reyhanlı (Kars) (Tomov and Gruev, 1975; Gruev and Tomov, 1979).

Material examined: Atatürk Orman Çiftliği, Temelli and Bağlum Köyü (Ankara), 4.5.-3.7.1977, 3 exs.; Lalahan, Ayaş, Dodurga Köyü-Ankara, Kızılcahamam-Göнем Köyü, Gerede-Kızılcahamam, Hasanoğlan, Karagöl (Ankara), 18.4-13.7.1978 69 exs. on Rumex sp. and Polygonum sp.; Kayseri, 22.5.1978 1 ex.; Araplı (Nevşehir), 20.6.1978 1 ex.; Konya Harası, 27.4.1978 5 exs.; (HK). Kızılcahamam (Ankara), 1969 leg. Seidenstuecker 1 ex. (MZS).

Occurrence: Rather common.

Phaedon armoraciae (Linnaeus, 1758)

Locus typicus: Europe

Synonymy: Chrysomela cochleariae Panzer, 1797; Chrysomela parvulus Duftschmidt, 1825; Chrysomela salicinus Heer, 1845; Phaedon betulae Kuester, 1846; Phaedon veronicae Bedel, 1892.

Distribution: Europe, Siberia, Japan, N. America, (Weise, 1916; Winkler, 1932) and Turkey. Previous record from Turkey: Rize (Tomov and Gruev, 1975).

Material examined: Nevşehir, 20.5.1978 1 ex. on Cruciferae sp., (HK).

Occurrence: Very rare.

Phaedon cochleariae (Fabricius, 1792)

Locus typicus: Not known.

Synonymy: Altica arucae Panzer, 1794; Chrysomela egenus Gyllenhal, 1827; Phaedon omissus Sahlberg, 1834; Phaedon galeopsis Letzner, 1848; Phaedon grammicus Suffrian, 1851; Phaedon auratus Motschulsky, 1860; Phaedon gramicus Redtenbacher, 1874.

Distribution: Europe, Greece, Turkey (Weise, 1916; Winkler, 1932). Previous record from Turkey: Trabzon (Tomov and Gruev, 1975).

Material examined: Imrahor Köyü (Ankara), 12.4-4.5.1977 4 exs.; Akyurt Köyü - Kalecik (Ankara) 9.5.1978 20 exs.; Selimağa Köyü - Kaman (Kırşehir), 13.5.1979 5 exs.; Niğde, 19.5.1978 10 exs.; Kayseri, 22.5.1978 10 exs., (HK).

Occurrence: Common. All the specimens studied here were found on a water plant, Cardamine impatiens in large numbers, thus collected by sampling.

Phaedon pyritosus (Rossi, 1792)

Locus typicus: Europe

Synonymy: Altica graminis Panzer, 1799; Chrysomela graminicola Draparnaudz, 1819; Phaedon orbicularis Redtenbacher, 1874; Phaedon hederæ Marseul, 1888.

Distribution: N. Africa, Europe, Turkey, Turkestan, (Weise, 1916; Winkler, 1932). Previous records from Turkey: Maçka (Istanbul), Çarşamba (Samsun), Eskişehir (Bodemeyer, 1900; Medvedev, 1970); Tomov and Gruev, 1975).

Material examined: Dodurga Köyü (Ankara), 11.5.1978 2 exs.; Ankara - Konya High Way 60. km 19.5.1975 2 exs.; Kızılca (Kırşehir), 13.5.1979 5 exs. on Ranunculus sp.; Boğazlıyan (Yozgat), 21.5.1978

1 ex.; Küllük Köyü (Sivas), 23.5.1978 2 exs.; Kulu (Konya), 19.5.1978
1 ex.; Merzifon (Amasya), 19.5.1978 1 ex., (HK).

Occurrence: Not common

Only above 3 species of Phaedon were recorded for both Central
Anatolia and Turkey.

Key to the species of Phaedon in Turkey

1. The sutures between the lateral sides of elytra and epipleurae disappear before the middle of elytra (Fig. 1); body metallic bronze; aedeagus, Fig. 3; spermatheca, Fig. 6; males 3.0-3.4, females 3.4-4.0 mm Ph. pyritosus (Rossi)
- The sutures between the lateral sides of elytra and epipleurae continue along the whole elytra (Fig. 2); body metallic dark green; aedeagus and spermatheca otherwise 2
2. The longitudinal rows of elytral punctures regular, the intersitial punctures finer than the punctures of rows; aedeagus, Fig. 4; spermatheca, Fig. 7; males 3.0-3.7, females 3.4-4.5 mm Ph. cochlearia (Fabricius)
- The longitudinal rows elytral punctures irregular posteriorly, all the punctures in more or less the same size; aedeagus, Fig. 5; spermatheca, Fig. 8; males and females 3.0-4.0 mm Ph. armoraciae (Linnaeus)

Prasocuris junci (Brahm, 1790)

Locus typicus: Not known.

Synonymy: Crioceris violacea Fabricius, 1792; Chrysomela beccabungae Illiger (in) Schneider, 1794.

Distribution: N. Africa and Europe (Weise, 1916; Winkler, 1932) and Turkey. Previous records from Turkey: Bolkar Dağı - Ali Hoca Köyü, Marmaris (Muğla), Gümüşhane, Samsun (Bodemeyer, 1900; Medvedev, 1975; Tomov and Gruev, 1975).

Material examined: Beytepe and Imrahor Köyü (Ankara), 5 - 24.4.1978 8 exs.; Dodurga Köyü, Ayaş, Atatürk Orman Çiftliği, Kışlacık - Karagöl, Kayaş, Beynam, Akyurt and Hacı Köyü - Kalecik (Ankara), 18.3. - 1.6.1978 44 exs.; Selimağa Köyü- Kaman (Kırşehir), 13.5.1979 7 exs.; Yerköy (Yozgat), 7.5.1978 3 exs.; Ürgüp (Nevşehir), 20.5.1978 4 exs.; Kayseri, 22.5.1978 2 exs.; Küllük Köyü (Sivas), 23.5.1978 2 exs.; Akşehir (Konya) 28.4.1978 2 exs.; Sivrihisar (Eskişehir), 29.4.1978 4 exs.; Çay (Afyon), 18.5.1979 2 exs., (HK).

Occurrence: Common, always found on Cardamine impatiens together with Phaedon cochleariae sometimes in large numbers.

Plagioderia versicolora (Laicharting, 1781)

Locus typicus: Not known.

Synonymy: Plagioderia cognate and Pl. similis Herbst (in) Fuessly, 1783; Plagioderia salicis Panzer, 1795.

Distribution: N. Africa, Europe, Siberia and Japan (Weise, 1916;

Winkler, 1932) and Turkey. Previous records from Turkey: Yalova - Istanbul, Sapanca - Sakarya, Izmit, Tire - Bornova and Ödemiş (Izmir), Turhal (Amasya), Samsun, Trabzon (Medvedev, 1975; Gül-Zümreoğlu, 1972; Kısmalı, 1973).

Melasoma populi (Linnaeus, 1758)

Locus typicus: Europe.

Distribution: N. Africa, Europe, Asia, China, Japan, Greece and Turkey (Weise, 1916; Winkler, 1932; Charas, 1972). Previous records from Turkey: Karaköy (Istanbul); Bilecik, Samsun, Köprübaşı (Samsun), Merzifon, Erzincan, Amasya, Kars, Bornova - Kemalpaşa - Tire - Kiraz - Ödemiş - Bergama - Kınık - Menemen (Izmir), Selçuk (Aydın) (Bodemeyer, 1900; Kısmalı, 1973; Tomov and Gruev, 1975; Gruev and Tomov, 1979).

Material examined: Lalahan, Elmadağ, Bayındır Barajı (Ankara), 1.6 - 26.8.1977 25 exs.; Lalahan, Beynam, Kızılcahamam, Soğuksu Milli Parkı, Karagöl (Ankara), 21 exs.; Nevşehir, Hacibektaş (Nevşehir), 20 - 21.5.1978 5 exs.; Bor, Aksaray (Niğde), 19.5.1978 6 exs.; Paşabahçe (Sivas), 18.6 - 30.7.1979 8 exs.; Boğazkale (Çorum), 25.5.1978 2 exs.; (HK).

Occurrence: Common and always found on Populus spp. in large numbers. Material presented above was sampled to record the localities.

Melasoma saliceti Weise, 1884

Locus typicus: Not known.

Synonymy: Melasoma tramulae Suffrian, 1851 (nec. Fabricus, 1787).

Distribution: Europe, Greece and Turkey (Weise, 1916; Winkler, 1932; Charas, 1972).

Material examined: Atatürk Orman Çiftliği, Beytepe Köyü, Bağlum, Elmadağ, Temelli, Lalahan (Ankara), 21.5 - 6.9.1977 19 exs.; Kalecik - Hacı Köyü, Beynam, Dodurga Köyü (Ankara), 5.5 - 27.6.1978 40 exs.; Eldivan, Kızılırmak (Çankırı), 6 - 9.5.1978 11 exs.; Kırşehir, Çuğun Barajı, Kızılca (Kırşehir), 5.5 - 13.5.1978 5 exs.; Nevşehir 20.5.1978 5 exs.; Çekerek (Yozgat), 13.6.1978 5 exs.; Yıldızeli (Sivas), 14.7.1979 1 ex.; Akşehir (Konya), 28.4.1978 1 ex.; İçeri, Çumra, Ereğli, Kızılören, Bozkır - Haydar Dağı, 1400 m (Konya), 14 - 16.6.1980 63 exs.; Boğazkale, Sungurlu, Koparan (Çorum), 25.5 - 12.6.1978 15 exs., (HK).

Occurrence: Common. Material examined was collected on Salix and Populus spp. and sampled to record the localities.

All together 4 species of Melasoma were recorded from Turkey only above 2 species occur in Central Anatolia.

Key to the species of Melasoma in Central Anatolia

1. The apex of each elytron with a black spot and lateral edges of each elytron with one row of punctures in parallel to the elytro - epipleural suture (Fig. 9); aedeagus, Fig. 11; spermatheca, Fig. 13; males 9.5-11.0, females 10.2-12.0 mm ..
..... M. populi (Linnaeus)
- Elytron spotless, the lateral edges of each elytron with 2 irregular rows of punctures in parallel to the elytro - epipleural suture (Fig. 10); aedeagus, Fig. 12, spermatheca, Fig. 14; males 7.5-8.5, females 8.5-9.5 mm .. M. saliceti (Weise)

Phytodecta forniculatus Brueggemann, 1873

Locus typicus: Germany.

Synonymy: Chrysomela sexpunctata Panzer, 1896.

Distribution: N. Africa, Europe, Turkey, Syria (Weise, 1916; Winkler, 1932). Previous records from Turkey: Bilecik - Sapanca, Çankırı, Ankara, Kiraz - Torbalı - Menemen - Bergama (Izmir), Konya, Kadirli - Karatepe (Adana), Diyarbakır (Bodemeyer, 1900, 1906; Medvedev, 1970; Tuatay et al., 1972; Kismali, 1973; Grucev and Tomov, 1979).

Material examined: Beytepe Köyü, Saray Köyü, Karşıyaka, Bayındır Barajı, Temelli Köyü, Kızılcahamam (Ankara), 2.5 - 19.6.1977 10 exs.; Karşıyaka, Dodurga Köyü, Lalahan, Etimesgut - Eryamak, Çubuk Barajı II, Karagöl - Kışlacık Köyü, Kalecik - Tüney Köyü, Eymir Gölü (Ankara) 16.4 - 7.6.1978 41 exs.; Eldivan (Çankırı), 9.5.1978 2 exs.; Boğazlıyan (Yozgat), 21.5.1978 2 exs.; Aksaray (Niğde), 17.5.1978 4 exs.; Konya Harası, 27.4.1978 11 exs.; Çumra, Hadım - Taşkent (Konya), 15 - 18.6.1980 4 exs.; Ürgüp (Nevşehir) 2.5.1978 1 ex., (HK).

Occurrence: Common. Material studied was collected on Medicago sativa, Vicia sativa and Trifolium sp., usually by sampling.

Phyllodecta laticollis Suffrian, 1851

Locus typicus: Sicily (Italy)

Synonymy: Phyllodecta altaicus Motschulsky, 1860; Phyllodecta cavifrons C. G. Thompson, 1866.

Distribution: Europe, Siberia, Caucasia, Turkey, Syria, Lebanon (Weise, 1916; Winkler, 1932).

Material examined: Kızılcahamam - Yanıklar Köyü (Ankara) 13.4.1979 5 exs.; Kızılcahamam - Güven, 9.6 - 4.8.1978 15 exs.; Kızılırmak (Çankırı) 15.5.1978 2 exs., (HK).

Occurrence: Not common, all collected on Salix sp.

Phyllodecta vitellinae (Linnaeus, 1758)

Locus typicus: Europe

Synonymy: Phyllodecta angusticollis Motschulsky, 1860; Phyllodecta latipennis Motschulsky, 1860.

Distribution: N. America, Europe, Siberia (Weise, 1916; Winkler, 1932) and Turkey. Previous records from Turkey: Karagöl (Ankara), Giresun - Balaban Dağları (Tomov and Gruev, 1975).

Material examined: Imrahor Köyü, Ayaş, Bağlum Köyü (Ankara), 4.5 - 9.7.1977 6 exs.; Çubuk - Karagöl, Kızılcahamam - Güven (Ankara), 7.7 - 4.8.1978 10 exs.; Çubuk - Karagöl, Kızılcahamam - Yanıklar Köyü (Ankara), 13.4 - 20.6.1979 9 exs.; Koparan (Çorum), 25.5.1978 41 exs., (HK).

Occurrence: Not common but sometimes found in large numbers; all specimens examined were collected on Salix spp.

Phyllodecta tibialis Suffrian, 1851

Locus typicus: Nürnberg (Germany).

Synonymy: Phyllodecta vulgatissimus var. Kelner, 1873; Phyllodecta viennensis Weise, 1882.

Distribution: Europe (Weise, 1916; Winkler, 1932). There is no previous record from Turkey.

Material examined: Kızılcahamam (Ankara), 9.6.1978 8 exs. on Salix sp., (HK).

Occurrence: This is a rare species and a new record for Turkish fauna.

Together with the new record of Ph. tibialis here Phyllodecta is represented with 4 species in Turkey and with 3 species in Central Anatolia.

Key to the species of Phyllodecta in Central Anatolia

1. Despite the interstitial punctures, the rows of elytral punctures 7, 8 and 9 still distinct (Fig. 15); in male the tarsal segment 1 as large as the segment 3 and the claw segment longer than the tarsal segments 1 plus 2; apex of aedeagus more or less conical, Fig. 19; males and females 4.0-4.7 mm Phyll. tibialis Suffrian
- The rows of elytral punctures 7, 8 and 9 confused with the interstitial punctures of same size (Fig. 16); in male, the tarsal segment 1 narrower than the segment 3; the claw segment not larger than the tarsal segments 1 plus 2; apex of aedeagus widened (Figs. 20 and 21) 2
2. Fronto - clypeus with a "X" shaped groove (Fig. 17); aedeagus as in Fig. 20; males and females 4.2-5.0 mm Phyll. laticollis Suffrian
- Fronto - clypeus with a "V" shaped groove (Fig. 18); aedeagus in Fig. 21; males and females 4.2-5.2 mm Phyll. vitellinae (Linnaeus)

Timarcha pratensis (Duftschmidt, 1829)

Locus typicus: S. Italy.

Synonymy: Timarcha coriaria Olivier, 1807; Timarcha venosula Weise, 1882. Previous records from Turkey: Istanbul, Eskişehir, Akşehir - Sultandağı (Konya) (Bodemeyer, 1900; Weise, 1916).

Material examined: Akşehir (Konya), 1900 leg. Korb. 1 ex.; Amasya, 1888 leg. Korb. 1 ex., (OT).

Occurrence: Rare.

Entomoscelis adonidis (Pallas, 1771)

Locus typicus: Not known.

Synonymy: Chrysomela sacra Linnaeus, 1758; Chrysomela trilineata Fabricius, 1777; Chrysomela dorsalis Fabricius, 1777; Chrysomela melanostoma Gmelin (in) Linnaeus, 1790; Entomoscelis goliath Abeille, 1897 (goliath = adonidis: Lopatin, 1967).

Distribution: N. America, Europe, Siberia, Turkey (Hatay - Akbes) (Weise, 1916; Winkler, 1932). Other records from Turkey: Ankara, Eskişehir, Bolvadin (Afyon), Karapınar (Konya), Bornova (İzmir), Erciyes Dağı (Kayseri), Merzifon and Turhal (Amasya), Hasankale (Erzurum) (Kerville, 1939; Tuatay et al., 1972; Gül-Zümreoğlu, 1972; Tomov and Gruev, 1975).

Material examined: Atatürk Orman Çiftliği, Beytepe Köyü, Gıcık Köyü, Ayaş, Karşıyaka, Temelli (Ankara), 16.5 - 9.6.1977 12 exs. on Adonidis aestivalis, Neslia apiculata, Verbascum sp.; Beytepe Köyü, Dodurga Köyü, Ayaş - Ilıca, Etimesgut, Nallıhan, Beynam, Kalecik (Ankara), 16.4 - 12.6.1978 33 exs. on Adonidis aestivalis, Lopidium califolium, Alyssum lepidonotum, Sysymbrium sp., Yozgat, Boğazlıyan, Yerköy, Sekili, Çekerek (Yozgat), 7.5 - 17.6.1978 44 exs.; Kaman, Selimağa Köyü (Kırşehir), 13.5.1979 11 exs.; Nevşehir, Gülşehir (Nevşehir), 20 - 21.5.1978 9 exs.; Bünyan, Sarıoğlan (Kayseri) 22.5.1978 4 exs.; Gemerek (Sivas) 22.5.1978 6 exs. on Adonidis aestivalis; Bor (Niğde) 19.5.1978 1 ex.; Konya Harası, 27.4.1978 1 ex.; Cihanbeyli (Konya) 19.5.1977 2 exs.; Hamidiye (Eskişehir) 17.5.1979 1 ex., (HK).

Occurrence: Common, sometimes in large numbers.

Entomoscelis suturalis Weise, 1882

Locus typicus: Salonica (Greece).

Distribution: Greece and Crimea (Weise, 1916; Winkler, 1932) and Turkey. Previous records from Turkey: Ankara and Amasya (Kerville, 1939; Tomov and Gruev, 1975).

Material examined: Demetevler, Lalahan (Ankara), 18 - 28.6.1977 12 exs. on Glacium corniculatum; Dodurga Köyü, Eymir Gölü, Etimesgut

(Ankara) 16.4 - 11.5.1978 12 exs.; Çuğun Barajı (Kırşehir), 7.5.1978 5 exs.; Boğazlıyan, Yerköy - Sekili (Yozgat) 7 - 12.5.1978 10 exs.; Kozaklı, Gülşehir (Nevşehir) 21.5.1978 18 exs.; Bor (Niğde); 19.5.1978 1 ex.; Cihanbeyli (Konya) 19.5.1979 2 exs. on Glacium corniculatum, (HK).

Occurrence: Common.

Entomoscelis is represented with 3 species in Turkey and with 2 in Central Anatolia.

Key to the species of Entomoscelis in Central Anatolia

1. Body ovate, each elytron with sutural and mid - lateral longitudinal black vit-tae (Fig. 22); aedeagus as in Fig. 24; males 6.0-7.8, females 6.8-8.5 mm E. adonidis (Pallas)
- Body round, each elytron only with a sutural black vitta (Fig. 23); aedeagus as in Fig. 25; males 5.7-7.0, females 6.3-8.3 mm E. suturalis Weise

Özet

Türkiye'den bazı Chrysomelinae (Col., Chrysomelidae) Türleri II. Colaphellus, Gastroidea, Phaedon, Prasocuris, Plagiodera, Melasoma, Phytodecta, Phyllodecta, Timarcha, Entomoscelis

İç Anadolu Bölgesi'nde bulunan 10 cinse ait 16 tür, Türkiye'nin diğer bölgelerinden sağlanan örneklerle karşılaştırılarak incelenmiştir. İç Anadolu'da birden fazla türü saptanan Phaedon, Melasoma, Phyllodecta ve Entomoscelis cinslerine ait tanı anahtarları verilmiştir. İncelenen materyale ait kayıtlardan çoğu türlerin Türkiye'deki yayılış alanı için, Phyllodecta tibialis Suffr. ise Türkiye için yenidir.

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Illustration of Figures

Figures 1-8. Structure of elytra in (1) *Phaedon pyritosus*, (2) *Ph. cochleariae*
and *Ph. armoraciae*; structure of aedeagus in (3) *Ph. pyritosus*, (4) *Ph. cochleariae*,
(5) *Ph. armoraciae* and of spermatheca in (6) *Ph. pyritosus*, (7) *Ph. cochleariae*, (8)
Ph. armoraciae, D. dorsal, L. lateral view:

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structure of aedeagus in (11) *M. populi*, (12) *M. saliceti* and of spermatheca in (13)
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