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# On the fauna of the Coleophoridae of Mexico (Lepidoptera: Coleophoridae)

H. W. van der Wolf

## Abstract

16 new species are described from Mexico: *Coleophora papalotontli* van der Wolf, sp. n., *C. powelli* van der Wolf, sp. n., *C. saltoella* van der Wolf, sp. n., *C. tehuacanella* van der Wolf, sp. n., *C. coahuila* van der Wolf, sp. n., *C. popoloca* van der Wolf, sp. n., *C. bajacalsur* van der Wolf, sp. n., *C. penicillata* van der Wolf, sp. n., *C. pueblana* van der Wolf, sp. n., *C. catavinae* van der Wolf, sp. n., *C. puntaprietae* van der Wolf, sp. nov., *C. yagul* van der Wolf, sp. n., *C. bajacaliforniae* van der Wolf, sp. n., *C. iztac* van der Wolf, sp. n., *C. incerta* van der Wolf, sp. n. and *C. mexicacopa* van der Wolf, sp. n. Of *C. yagul* the foodplant is given and the larval case described and illustrated. The female genitalia of *C. mexicana* Landry, 1994 are described and illustrated for the first time. *C. versurella* Zeller, 1849 is reported from Mexico for the first time.

KEY WORDS: Lepidoptera, Coleophoridae, Nearctic, new species, Mexico.

## Sobre la fauna de Coleophoridae de México (Lepidoptera: Coleophoridae)

## Resumen

Se describen 16 nuevas especies de México: *Coleophora papalotontli* van der Wolf, sp. n., *C. powelli* van der Wolf, sp. n., *C. saltoella* van der Wolf, sp. n., *C. tehuacanella* van der Wolf, sp. n., *C. coahuila* van der Wolf, sp. n., *C. popoloca* van der Wolf, sp. n., *C. bajacalsur* van der Wolf, sp. n., *C. penicillata* van der Wolf, sp. n., *C. pueblana* van der Wolf, sp. n., *C. catavinae* van der Wolf, sp. n., *C. puntaprietae* van der Wolf, sp. nov., *C. yagul* van der Wolf, sp. n., *C. bajacaliforniae* van der Wolf, sp. n., *C. iztac* van der Wolf, sp. n., *C. incerta* van der Wolf, sp. n. y *C. mexicacopa* van der Wolf, sp. n. Se da la planta nutricia de *C. yagul* y se describe e ilustra el saco larvario. Por primera vez, se describe e ilustra la genitalia de la hembra de *C. mexicana* Landry, 1994. Se menciona por primera vez para México *C. versurella* Zeller, 1849.

PALABRAS CALVE: Lepidoptera, Coleophoridae, Neártico, nuevas especies, México.

## Introduction

The Coleophora fauna of Mexico is poorly known. In the World Catalogue of Insects (BALDIZZONE *et al.*, 2006) only three species are mentioned from Mexico: *Coleophora decipiens* Walsingham, 1914, *C. mexicana* Landry, 1994 and *C. pelinopis* Meyrick, 1933. The material dealt with in this paper mainly originated from the collection of the Essig Museum of Entomology, University of California, Berkely. It was collected during expeditions in the sixties, seventies and eighties of the twentieth century. The order in which the species are represented roughly follows Toll's systematic group system. In spite of the fact that Toll's system is based on palearctic species only and should be replaced by a more modern system, it is still useful. This is proven by the circumstance that most species described in this paper can be attributed to Toll's 30th group.

All specimens treated in this paper are deposited in the Essig Museum of Entomology, The University of California, Berkely.

## Abbreviations and Explanations

EMEC: Essig Museum of Entomology, The University of California, Berkely.  
gen. prep. Wf: genital preparation van der Wolf

Nahuatl: The language spoken by the Aztecs in Central Mexico, and still being used in several regions of Mexico.

## Systematic part

### *Coleophora mexicana* Landry, 1994

Material examined: MEX: Veracruz, 2 mi. W., El Joyita, 2230 m., Hwy H 140, 22-VIII-1977, E. I. Schlinger, gen.prep. ♀ Wf 12047; 1 ♀ MEX: Veracruz, 6 mi. SE Rinconada, 30-IX-[19]75 at light, J. Powell & J. Chemsak collectors, 1 ex. without abdomen; MEXICO: Veracruz, Coscomatepec NE, 9-VII-[19]75, J. A. Chemsak & J. Powell

Diagnosis: The specimens exactly correspond with the description of *Coleophora mexicana* Landry, 1994, a species described after one male specimen collected at Gomes Farias, Tamaulipas, Mexico (LANDRY, 1994). According to Landry the species most likely belongs to the *ramitella* group of metallic-green Coleophoridae, and is closely related to *C. timarella* Landry & Wright, 1993. The female genitalia are here described for the first time.

Description female genitalia (Fig. 34): Papillae anales long, slender. Apophyses posteriores 1,5 times longer than anteriores. Sterigma subtrapezoid, medially excavated; caudal margin with strong bristles. Ostium bursae cup-shaped, almost as wide as sterigma, gradually narrowing into a transparent ductus bursae with central line; at 2/6 a chitinous sleeve with tiny spikes, at 5/6 a slightly chitinated convolution, at 6/6 a transparent section with very tiny spikes followed by an ovoid bursa; a thorn-like signum on an indistinct basal plate, and a small rasp-like signum.

Distribution: The specimens were collected at three different localities in Veracruz; the holotype was collected in Tamaulipas, the Mexican state north of Veracruz.

Bionomy: The early stages and the foodplant are not known.

### *Coleophora versurella* Zeller, 1849

Material examined: "MEXICO: Puebla, 2 mi SW Tehuacan, 5300, 5-X-[19]75 blacklight trap J. Powell collector", 2 ♂♂, Wf. 12049, 12055.

Remark: The species is widespread over the holarctic, nearctic and neotropical regions, where it occurs in agricultural areas, feeding on the seeds of agricultural weeds. It is placed in the 30th species group of Toll's system, having the characteristic double-rod phallotheca.

Distribution: Palearctic: Widely distributed. Oriental: Arabian peninsula, India. Nearctic (adventive): Canada, U.S.A. Neotropical (adventive): Argentina, Chile. The species is **new for Mexico**.

Bionomy: The larvae feed in a tubular case on the seeds of *Amaranthus*, *Atriplex* and *Chenopodium*.

### *Coleophora papalotontli* van der Wolf, sp. n. (Fig. 1)

Holotype ♂: MEXICO, Puebla 2 mi. SW Tehuacan, 5300, 4-X-1975 blacklight trap 2300-0600 Powell, gen. prep. Wf 12051.

Diagnosis: A species characterized by its small size and almost uniform silvery whitish-beige colour. The double rods of the phallotheca of the male genitalia indicate that the species belongs to the

30th species-group of Toll's system. The main characteristic in the male genitalia is the crescent-shaped dorsal process of the sacculus.

Description: Wingspan 10 mm. Head whitish. Labial palp whitish. Antenna: the scape, without scale tuft, is whitish; flagellum ringed white and dark grey. Forewing uniformly silvery whitish-beige; fringes beige. Hindwing not visible: the specimen, not spread, is glued on cardboard.

Male genitalia (Fig. 17): Gnathos knob globular. Tegumen narrow, medially constricted. Pedunculus slender, slightly rounded. Transtilla slender. Valvula indistinct. Cucullus short, broad, with rounded apex. Ventral margin of sacculus with convex fold; dorsal process of sacculus crescent-shaped. Phallosome with two slender straight rods with blunt tips slightly bent upwards. Cornuti a long curved bundle of needle-like spikes.

Female genitalia: Unknown.

Bionomy: The species flies in October at an altitude of 1780 meters. The early stages and the foodplant are unknown.

Distribution: The species is only known from the Mexican State of Puebla.

Etymology: The name of the species is derived from Nahuatl: *papalotontli* = small moth.

***Coleophora powelli* van der Wolf, sp. n. (Fig. 2)**

Holotype ♂: MEXICO, Puebla 2 mi SW Tehuacan, 5300, 4-X-[19]74 blacklight trap, J. Powell collector; gen. prep. Wf 12150. Paratypes: 1 ♂, same data, gen. prep. Wf 12057; 3 ♂ same data, but 5-X-[19]74, gen. preps ♂ Wf 12148, 12149, 12048.

Diagnosis: A species of medium size characterized by almost uniform light greyish-beige colour, with darker costal region. The male genitalia indicate that the species belongs to Toll's 30th species-group with double phallosome rods. It is closely related to *Coleophora saltoella* van der Wolf sp. n., from which it differs by the rectangular shape of the dorsal process of the sacculus, the longer and more slender cucullus and the greater number of cornuti.

Description: Wingspan 16 mm. Head whitish. Labial palp long, whitish internally and externally; third segment about 2/3rd length second. Antenna whitish, scape without scale tuft. Forewing uniformly light greyish-ochreous, with occasional faint dark scales and a darker costal region. Fringe whitish. Hindwing light beige. Fringe grey.

Male genitalia (Fig. 18): Gnathos knob globular. Tegumen stretched, medially constricted. Pedunculus slender, rounded. Transtilla linear, slender. Valvula small, triangular. Cucullus long, rather narrow, with rounded apex. Sacculus with slightly convex ventral margin, ending in a rather rectangular dorsal process. Phallosome slender, with two rods with ladle-shaped upturned apices; cornuti with one long and one shorter bundle of needle-like spikes.

Bionomy: The species flies in October at an altitude of 1780 meters. The early stages and the foodplant are unknown.

Distribution: Only known from the Mexican State of Puebla.

Etymology: The species is named after Jerry A. Powell, who collected most of the specimens dealt with in this paper.

***Coleophora saltoella* van der Wolf, sp. n. (Fig. 3)**

Holotype ♂: MEX: Durango, 1 mi. W. El Salto, bl, 8600, 9-VIII-[19]86, Brown & Powell", gen. prep. Wf 12211. Paratypes: 1 ♂, MEX: Durango 8 mi. W. La Ciudad, 8700, 17-VIII-[19]72, MacNeil & Powell, gen. prep. Wf 12170; 2 ♂ [♂, MEXICO: Puebla 2 mi. SW Tehuacan, 5300, 5-X-1975, blacklight trap J. Powell collector, gen. preps. Wf 12053, 12056.

Diagnosis: A species characterized by its almost uniform nutbrown colour. It belongs to Toll's 30th species group, with double phallosome rods. It is closely related to *Coleophora powelli* van der Wolf sp. n., from which it differs by its uniform brown colour, its hook-shaped dorsal process of the sacculus, the shorter and broader cucullus and the smaller number of cornuti.

Description: Wingspan 14 mm. Head dark brown. Labial palp internally whitish, externally light grey-brown; third segment about half length second. Antenna: scape without scale tuft, whitish; flagellum ringed white and dark grey. Forewing uniformly nutbrown, with narrow white costal streak. Fringes light grey. Hindwing light greyish-ochreous. Fringes light grey.

Male genitalia (Fig. 19): Gnathos knob globular. Tegumen stretched, medially strongly constricted. Pedunculus slender, slightly rounded. Transtilla robust, club-shaped, with strong bristles. Valvula indistinct, rounded. Cucullus broad, with rounded apex. Sacculus with convex ventral margin, with hook-shaped dorsal process. Phallosome with two rods of equal length, gradually tapering towards apex and ending in triangular apical teeth; cornuti a bundle of long spikes.

Bionomy: The species flies in August-October at an altitude of 1780-2820 meters. The early stages and the foodplant are unknown.

Distribution: Found in the Mexican States of Durango and Puebla.

Etymology: The species is named after the type locality El Salto in the Mexican State of Durango.

***Coleophora tehuacanella* van der Wolf, sp. n. (Fig. 4)**

Holotype ♂: MEXICO, Puebla 2 mi SW Tehuacan, 5300, 4-X-1975 blacklight trap Powell", gen.prep. Wf 12055. Paratypes: 2 ♂♂, same date, same locality, gen. prep. Wf 12054, 12144; 1 ♂, same locality, 5-X-1975, gen. prep. Wf 12045.

Diagnosis: A small-sized species. The male genitalia show a structure that is typical for species group 30 of Toll's system., which has a double-rod phallosome. An almost identical genital structure can be found in *Coleophora meridonella* Rebel, 1912, a species from the mediterranean region, and in *Coleophora zymotica* Meyrick, 1931, described from Paraguay.

Description: Wingspan 9 mm. Head white. Labial palp long, white, second segment twice length of third. Antenna: scape without scale tuft, flagellum ringed white and ochreous. Forewing silvery white with sparse greyish scales. Fringes greyish-ochreous. Hindwing beige. Fringes ochreous.

Male genitalia (Fig. 20): Gnathos knob lozenge-shaped, narrow. Tegumen narrow, medially constricted. Pedunculus slender. Transtilla slender. Valvula small, inconspicuous. Cucullus large, gradually widening towards rounded apex. Sacculus narrow with convex ventral margin, with small rounded process; dorsal process hook-shaped with blunt apex. Phallosome long, with two slender rods surpassing ventral margin of sacculus. Cornuti a long curved spine.

Female genitalia: Unknown.

Bionomy: The species flies in October at an altitude of 1780 meters. The early stages and the foodplant are not known.

Distribution: Only known from the type locality in the Mexican State of Puebla.

Etymology: The name of the species refers to the type locality: the city of Tehuacan in the Mexican State of Puebla.

***Coleophora coahuila* van der Wolf, sp. n. (Fig. 5)**

Holotype ♂: MEX., 1 ♂, SE Saltillo Coah[uila]. 6800, 23-IX-[19]76, J. A. Chemsak, J. Powell at light, gen.prep. Wf 12206.

Diagnosis: A small-sized species characterized by its orange-brown colour and white costal region. Judging from the male genitalia it belongs to Toll's 30th species group with double-rod phallosome.

Description: Wingspan 11 mm. Head white. Labial palp white; third segment 3/4th length second. Antenna, without scape tuft, with flagellum ringed black and white. Forewing orange-brown with occasionally dark scales giving it a rough appearance; costal region from base to 2/3rd white. Fringes silvery white. Hindwing light grey-brown. Fringes silvery white.

Male genitalia (Fig. 21): Gnathos knob conical. Tegumen stretched, medially constricted. Pedunculus broad, rounded. Transtilla hook-shaped. Valvula small, rounded. Cucullus long, gradually

widening towards rounded apex. Sacculus with ventral margin slightly convex, progressing with a scalloped margin to a small dorsal process. Phallotheca broad, two rods gradually tapering towards acute points surpassing the sacculus margin. Cornuti a long string of fine needles.

Bionomy: The species flies in September at an altitude of 2230 meters. The early stages and the foodplant are not known.

Distribution: So far only known from the Mexican State of Coahuila, which borders the U. S. State of Texas.

Etymology: The name refers to the Mexican State of Coahuila, where the species was collected. Nahuatl *coahuila* (*cuahuilan*) = Place among trees.

***Coleophora popoloca* van der Wolf, sp. n. (Fig. 6)**

Holotype ♂: MEXICO, Puebla 2 mi. SW Tehuacan, 5300, 4-X-[19]75 blacklight trap J. Powell collector", gen.prep. Wf 12143.

Diagnosis: A species characterized by its silvery white colour and small size. The male genitalia indicate that it belongs to Toll's 30th species group because of its twin-rod phallotheca. The main characteristics are the shape of the phallotheca and the spatulate dorsal process of the sacculus.

Description: Wingspan 12 mm. Head white. Labial palp white, third segment about half length of second. Antenna whitish, without scale tuft on scape. Forewing silvery white. Fringes greyish-white. Hindwing and fringes greyish-white.

Male genitalia (Fig. 22): Gnathos lob lozenge-shaped, narrow. Tegumen narrow. Pedunculus broadly widened. Transtilla broad, rectangular. Valvula large, rounded. Cucullus long, broad, with rounded apex. Sacculus narrow, ventral margin almost straight, ending in a spatulate process. Phallotheca stout, sclerotized, halfway divided into two straight rods with slightly curved apices. Cornutus a long thin spine.

Bionomy: The species flies in October at an altitude of 1780 meters. The early stages and the foodplant are unknown.

Distribution: The species is only known from the type locality: Tehuacan, in the Mexican State of Puebla.

Etymology: The name of the species refers to the Popoloca, one of the original populations of the Tehuacan valley (PLUNKET *et al.*, 2005). Nahuatl: popoloca = people who cannot be understood.

***Coleophora bajacalsur* van der Wolf, sp. n. (Fig. 7)**

Holotype ♂: MEX., Baja California Sur, Las Barracas, ca 30 km. E Santiago, 1-6-V-1982 Paul De Bach, collector malaise trap", gen. prep. Wf 12171.

Diagnosis: A medium-sized species with whitish ground colour suffused with light beige and with occasional dark scales. Costal area irregularly white. With its double-rod phallotheca it belongs to Toll's 30th species group. The male genitalia are characterized by a short cucullus, a sacculus with a hook-shaped ventral process and a crooked stout dorsal process.

Description: Wingspan 15 mm. Head beige. Labial palp white; third segment 3/4th length of second. Antenna: scape without scale tuft; flagellum ringed ochreous and white. Forewing ground colour white suffused beige, with occasional dark scales. Costal area white, irregularly bordered. Fringes light brown. Hindwing light beige. Fringes light brown.

Male genitalia (Fig. 23): Gnathos knob globular. Tegumen stretched, medially constricted. Pedunculus rather broad, rounded. Transtilla broad, crooked, tapering towards a rounded apex. Cucullus broad, short, with rounded apex. Valvula pronounced, rounded. Sacculus broad, with almost straight ventral margin with acute hook-shaped ventral process, and a stout slightly crooked dorsal process. Phallotheca with two slender rods, one with faint serrate dorsal edge. No cornuti observed.

Bionomy: The species flies in May. The early stages and the foodplant are unknown.

Distribution: Only known from the type locality: Mexico, Baja California Sur.

**Etymology:** The name is a shortening of Baja California Sur, the Mexican State where the species was collected.

***Coleophora penicillata* van der Wolf, sp. n. (Fig. 8)**

**Holotype** ♂: MEX., Durango 20 ml W. 8500, Dgo. MEX: 31-VII-[19]64, J. A. Chemsak & J. Powell, Black and White lights, gen.prep. Wf 12168. **Paratype** ♂ (Gen.prep. Wf 12218), MEX., Guerrero 10 km E. Tixtla, 18-22-IX-1982, elev. 1770 m. J. A. Powell & J. A. Chemsak”.

**Diagnosis:** A medium-sized species with light beige silky appearance. It belongs to Toll's 30th species group with double-rod phallotheca. In the male genitalia it is characterized by a huge hook-shaped dorsal process of the sacculus with numerous apical bristles.

**Description:** Wingspan 15 mm. Head whitish. Labial palp very long, white, third segment as long as second. Antenna without scale tuft on scape; flagellum ringed dark brown and white. Forewing silky light beige, with a very fine white costal streak; very faint whitish streaks along veins. Fringes brown-grey. Hindwing light grey. Fringes brown-grey.

**Male genitalia** (Fig. 24): Gnathos knob lozenge-shaped. Tegumen stretched, medially constricted. Pedunculus slender, slightly rounded. Transtilla slender, linear. Valvula inconspicuous. Cucullus short, broad, with rounded apex. Sacculus broad, with slightly convex ventral margin, ending in a square corner with small acute process. Dorsal process long, slender, its hooked apex covered with numerous bristles. Phallotheca with two stout rods tapering to acute apices, each topped with a triangular tooth. Cornuti a long bundle of spines.

**Bionomy:** The species flies in July-September at an altitude of 1770-2800 meters. The early stages and the foodplant are unknown.

**Distribution:** The species is known from the Mexican States of Durango and Guerrero.

**Etymology:** The species-name *penicillata* (Latin: *penicillatus* = with a brush) refers to the apical brush of the dorsal process of the sacculus.

***Coleophora pueblana* van der Wolf, sp. n. (Fig. 9)**

**Holotype** ♂: MEXICO, Puebla 2 mi. SW Tehuacan, 5-X-[19]75, 5300, blacklight trap J. Powell collector, gen.prep. Wf 12139; specimen glued on cardboard. **Paratypes:** 1 ♂, same data as holotype, gen.prep. Wf 12147; 3 ♂♂, same data as holotype, but 4-X-[19]75, gen.preps. Wf. 12146, 12046, 12052.

**Diagnosis:** A species characterized by its small size. Its ground colour is grey, speckled with many black scales. Judging from the male genitalia the species is related to Toll's 30th species group with a double-rod phallotheca. The very short and inconspicuous cucullus is characteristic for the species.

**Description:** Wingspan 14 mm. Head ochreous-white. Labial palp long, ochreous-white; third segment 3/4th length second. Antenna without scale tuft on scape, flagellum ringed light beige and white. Forewing whitish suffused grey, occasionally darker scales giving the forewing a rough appearance. Fringes greyish. Hindwing whitish-ochreous. Fringes grey.

**Male genitalia** (Fig. 25): Gnathos knob globular. Tegumen stretched, medially constricted. Pedunculus triangular. Transtilla long, hook-shaped, forming a V. Valvula small, triangular, inconspicuous. Cucullus very short, inconspicuous. Sacculus broad, ventral margin convex, gradually tapering towards cucullus, dorsal process pronged. Phallotheca with two slender rods projecting beyond cucullus and sacculus, apices acute. Cornuti a long string of tightly packed short spines.

**Bionomy:** The species flies in October at an altitude of 1780 meters. The early stages and the foodplant are not known.

**Distribution:** The species is only known from the Mexican State of Puebla.

**Etymology:** The name *pueblana* refers to the Mexican State of Puebla, the type locality of the species.



***Coleophora catavinae* van der Wolf sp. n.** (Fig. 10)

Holotype ♂: MEX., Baja Calif. Norte. Arroyo Catavina, Hwy 1, 35 mi. S. Progreso, 1-IV-[19]76, P. Rude blacklite trap, gen.prep. Wf 12208. Paratypes: 1 ♂, same data as holotype; 1 ♂, Mex., Baja Calif. Norte, 1 mi N. Meling Ranch, 2100, 17-III-1972, J. Doyen & J. Powell, at light", gen.prep. Wf 12210.

Diagnosis: A medium-sized species with white ground colour and some black streaks along veins. The species belongs to Toll's 30th species group with double-rod phallotheca. In the male genitalia the species is characterized by the long cucullus and the long dorsal process of the sacculus. Judging from the male genitalia the species is closely related to *Coleophora puntaprietae*. For differences see there.

Description: Wingspan 13-15 mm. Head white. Labial palp white; third segment 3/4th length of second. Antenna, without scape tuft, white. Forewing whitish, with thin black streaks along veins, growing stronger towards apex, darkening the wingtip. Fringes grey. Hindwing grey. Fringes dark brown.

Male genitalia (Fig. 26): Gnathos knob lozenge-shaped. Tegumen stretched, medially constricted. Pedunculus broadly rounded. Transtilla linear, slender. Valvula inconspicuous. Cucullus long, slender, with rounded apex. Sacculus large, with slightly convex ventral margin. Ventral process a large chitinated triangle with rounded top. Dorsal process a long irregularly shaped arm reaching middle of cucullus. Phallotheca with double slender rods surpassing sacculus. Cornuti a bundle of spines.

Bionomy: The species flies in March-April at an altitude of 690 meters. The early stages and the foodplant are unknown.

Distribution: Only known from the Baja California Norte.

Etymology: The name is derived from the type locality: Arroyo Catavina.

***Coleophora puntaprietae* van der Wolf sp. n.** (Fig. 11)

Holotype ♂: MEX., Baja Calif. Norte 24 mi. N. Punta Prieta, 1-2-IV-[19]73, S. L. Szerlip, J. Powell, J. Donohue at blacklight, gen.prep. Wf 12215. Paratype: 1 ♂ same data as holotype, gen.prep. Wf 12216.

Diagnosis: A medium-sized species with greyish-white forewings densely sprinkled with dark grey, black and dark brown scales. The species belongs to Toll's 30th species group with double-rod phallotheca in the male genitalia. They show that the species is closely related to *Coleophora catavinae* van der Wolf, sp. n. The differences are that in *puntaprietae* the forewing is unicolorous, whereas *catavinae* has black streaks along the veins; in *puntaprietae* the cucullus is short and broad, in *catavinae* long and narrow.

Description: Wingspan 14 mm. Head greyish-white. Labial palp: second segment white, third segment ochreous, half length of second. Antenna, without scape tuft, greyish-white; flagellum greyish-white, vaguely ringed grey. Forewing greyish-white, densely sprinkled with dark grey, black and dark brown scales. Costal fringes white, dorsal fringes brown-grey. Hindwing light grey. Fringes dark grey.

Male genitalia (Fig. 27): Gnathos knob globular. Tegumen stretched, medially constricted. Pedunculus broadly rounded. Transtilla triangular. Valvula large, rounded. Cucullus stout, short. Sacculus large, with rather straight ventral margin. Ventral process small, rounded. Dorsal process a long irregularly shaped arm surpassing cucullus. Phallotheca with two slender rods reaching half-way sacculus. Cornutus a long spine.

Bionomy: The species flies in April. The early stages and the foodplant are unknown.

Distribution: Only known from the Baja California Norte.

Etymology: The name refers to the type locality: Punta Prieta.

***Coleophora yagul* van der Wolf, sp. n.** (Fig. 12)

Holotype ♂: MEXICO, Oaxaca, Yagul, 30 km. E. Oaxaca, 1500 m. case leg. 22-II-1998, e. l., 27-III-1998, leg. HWvdWOLF, gen.prep. Wf 8965.



**Diagnosis:** A medium-sized species with white groundcolour overlaid with multiple dark and light brown streaks of different widths along veins. The species, with a double-rod phallotheca, belongs to Toll's 30th species group.

**Description:** Wingspan 13 mm. Head ochreous. Labial palp ochreous-white; third segment 3/4th length of second. Antenna, without scape tuft, whitish, faintly ringed brown. Forewing ground colour white with many dark and light brown streaks of different widths along veins; costal margin white. Fringes greyish-brown. Hindwing greyish-ochreous. Fringes greyish-brown.

**Male genitalia (Fig. 28):** Gnathos knob globular. Tegumen rather broad, medially slightly constricted. Pedunculus stretched, slightly rounded. Transtilla slender, straight. Valvula inconspicuous. Cucullus rather short and narrow. Saccus with rather straight ventral margin, progressing at 120° as a straight scalloped margin towards a blunt triangular dorsal process. Phallotheca with two slender rods tapering to acute apices. Cornuti a wavy bundle of numerous long spines.

**Bionomy:** One adult was bred from several larval cases found feeding on the leaves of *Baccharis* sp. Larval case (Fig. 33): Tubular, bivalved, length 8 mm. Oral opening 45° to the long axis. The colour of the case is greyish-ochreous. The surface of the case is rather rough. The case was collected in February, the adult emerged at the end of March in captivity inside the house, after having survived a flight to Europe. The species occurs at an altitude of 1500 meters.

**Distribution:** Only known from the Mexican State of Oaxaca.

**Etymology:** *Coleophora yagul* is named after the archeological site Yagul in the Mexican State of Oaxaca. The cases of the species were found among the ruins of this site on plants underneath an old tree. The Zapotec word *yagul* means old tree. (*ya* = tree, *gul* = old) (WIKIPEDIA).

### ***Coleophora bajacaliforniae* van der Wolf, sp. n. (Fig. 13)**

**Holotype** ♂: MEX., Baja Calif. Norte, 1 mi. N. Meling Ranch, 2100, 17-III-1972, J. Doyen & J. Powell, at light, gen.prep. Wf 12209. **Paratypes:** 2 ♂♂, same data as holotype, gen.prep. Wf 12207.

**Diagnosis:** A large species with greyish-white colour, sparsely sprinkled with very tiny black specks. Its systematic position is not clear. The male genitalia are reminiscent of those of *Coleophora granifera* Braun, 1919, a species known from Canada and the U.S.A. However, the habitus of the adult does not match.

**Description:** Wingspan 17-18 mm. Head greyish-white. Labial palp white, third segment half length second. Antenna without scape tuft; flagellum ringed dirty white and beige. Forewing greyish-white, sparsely sprinkled with very tiny black specks. Costal fringes white, dorsal ones greyish-brown. Hindwing greyish-white. Fringes greyish-brown.

**Male genitalia (Fig. 29):** Gnathos knob small, globular. Tegumen broad, not constricted. Pedunculus rather short, broad, rounded. Transtilla oblong, tapering towards a sharp point. Valvula oblong, rounded, progressing on to mid-cucullus. Cucullus short, broad. Saccus with ventral margin convex, reaching up to a conical point reaching the rounded cucullus apex. Phallotheca broadly tubular, tapering to an acute point reaching towards valvula. Cornuti a slender spike.

**Bionomy:** The species flies in March at an altitude of 690 meters. The early stages and the foodplant are unknown.

**Distribution:** Only known from the Mexican State of Baja California Norte.

**Etymology:** The name of the species refers to the type locality: the peninsula of Baja California.

### ***Coleophora iztac* van der Wolf sp. n. (Fig. 14)**

**Holotype** ♂: MEX., 17 mi. SE Saltillo Coahuila, 6800, 23-IX-[19]76, at light J. A. Chemsak & J. Powell, gen.prep. Wf 12201.

**Diagnosis:** A medium-sized species with snow-white forewings. The systematic position of the species cannot be ascertained.

**Description:** Wingspan 14 mm. Head snow-white. Labial palp white, second segment twice length

third, which is tinged yellowish. Antenna without scale tuft; flagellum white, strongly ringed black. Forewing snow-white. Fringes greyish-white. Hindwing light grey. Fringes light grey.

Male genitalia (Fig. 30): Gnathos knob conical. Tegumen stretched, narrow, medially strongly constricted. Pedunculus long, broadly rounded. Valvula rounded, with strong bristles, and with a long acute process directed towards cucullus. Cucullus narrow, gradually widening towards rounded apex. Saccus gradually narrowing towards a blunt triangular process. This process is strongly chitinized, with a strong tooth on its dorsal margin. On the border of the process and the saccus are about 10 parallel chitinized ridges. Phallosome broad, gradually tapering towards a blunt apex halfway the cucullus. Cornuti a sinuous bundle of long spines.

Bionomy: The species flies in September at an altitude of 2230 meters. The early stages and the foodplant are unknown.

Distribution: Only known from the type locality: The Mexican State of Coahuila.

Etymology: The name *iztac* refers to the colour of the forewing: Nahuatl: *iztac*= white.

***Coleophora incerta* van der Wolf, sp. n. (Fig. 15)**

Holotype ♂: MEX., Sin[aloa], El Palmito, 15 mi. W. 18-VII-[19]64, J. A. Chemsak, J. Powell, black and white lights, gen. prep. Wf 12179.

Diagnosis: A species characterized by differently coloured streaks along the forewing. It is difficult to attribute the species to a related group.

Description: Wingspan 16 mm. Head white. Antenna white, scape white without scale tuft. Labial palp white, third segment about as long as second. Forewing light yellow with narrow white costal streak; a brown wedge-shaped streak from root to apex, and a narrow brown streak along dorsum. Fringes brown. Hindwing grey-brown. Fringes grey.

Male genitalia (Fig. 31): Gnathos knob globular. Tegumen narrow, medially constricted. Pedunculus slender. Transtilla large, rhomboid. Valvula inconspicuous. Cucullus of medium length, broad, with rounded apex. Saccus with slightly convex ventral margin ending in a hook-shaped dorsal process, at its root a triangular flap. Phallosome heavily sclerotized, stout, gradually tapering towards an obtuse apex. Cornuti a short bundle of spikes.

Bionomy: The species flies in July. The early stages and the foodplant are unknown.

Distribution: The species is only known from the Mexican State of Sinaloa.

Etymology: The name of the species reflects its dubious systematic position. (Latin *incertus* = dubious).

***Coleophora mexicocopa* van der Wolf, sp. n. (Fig. 16)**

Holotype ♂: MEXICO, Puebla 2 mi SW Tehuacan, 5300, 5-X-[19]75, blacklight trap J. Powell collector, gen. prep. Wf 12142. Paratypes: 1 ♂, same data, gen. prep. Wf 12140; 1 ♂, same data, but X-4-75, gen. prep. Wf 12145.

Diagnosis: A medium-sized species with yellowish-white forewings. The systematic position of this species cannot be ascertained. In the male genitalia the species is characterized by the very short and inconspicuous cucullus, the large triangular dorsal process of the saccus and the peculiar slender, crooked processes issuing from the transtilla.

Description: Wingspan 11-12 mm. Head whitish. Labial palp: second segment white, third segment yellowish, 1/3rd length second. Antenna: scape white, without tuft. Flagellum ringed white and black. Forewing whitish, gradually turning yellowish towards apex. Fringes beige. Hindwing greyish-white. Fringes beige.

Male genitalia (Fig. 32): Gnathos knob globular. Tegumen broad, medially not constricted. Pedunculus broad, rounded. Transtilla linear, slender, on each distal end a slender crooked process. Valvula large, rounded, inconspicuous. Cucullus transparent, rather short, gradually tapering into an acute more sclerotized apex. Saccus broad, ventral margin convex, issuing into a triangular ventral

process, at the root with a finger-like process. Dorsal process large, triangular, surpassing the cucullus, at its dorsal margin an acute triangular process. Cornutus dagger-shaped.

Bionomy: The species flies in October at an altitude of 1780 meters. The early stages and the foodplant are unknown.

Distribution: Only known from Tehuacan in the Mexican State of Puebla.

Etymology: The name *mexicocopa* is the Nahuatl word for “mexican”.

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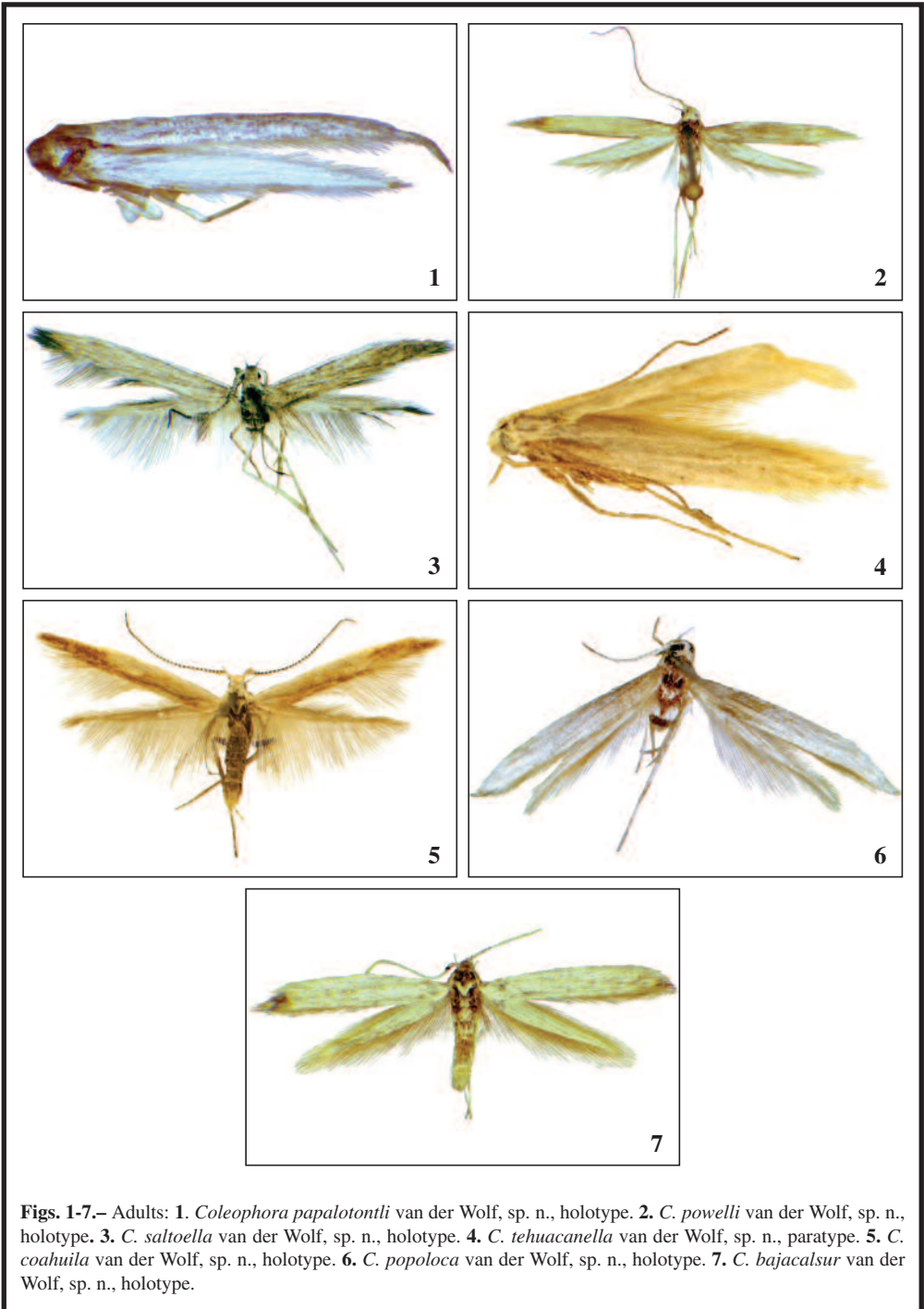
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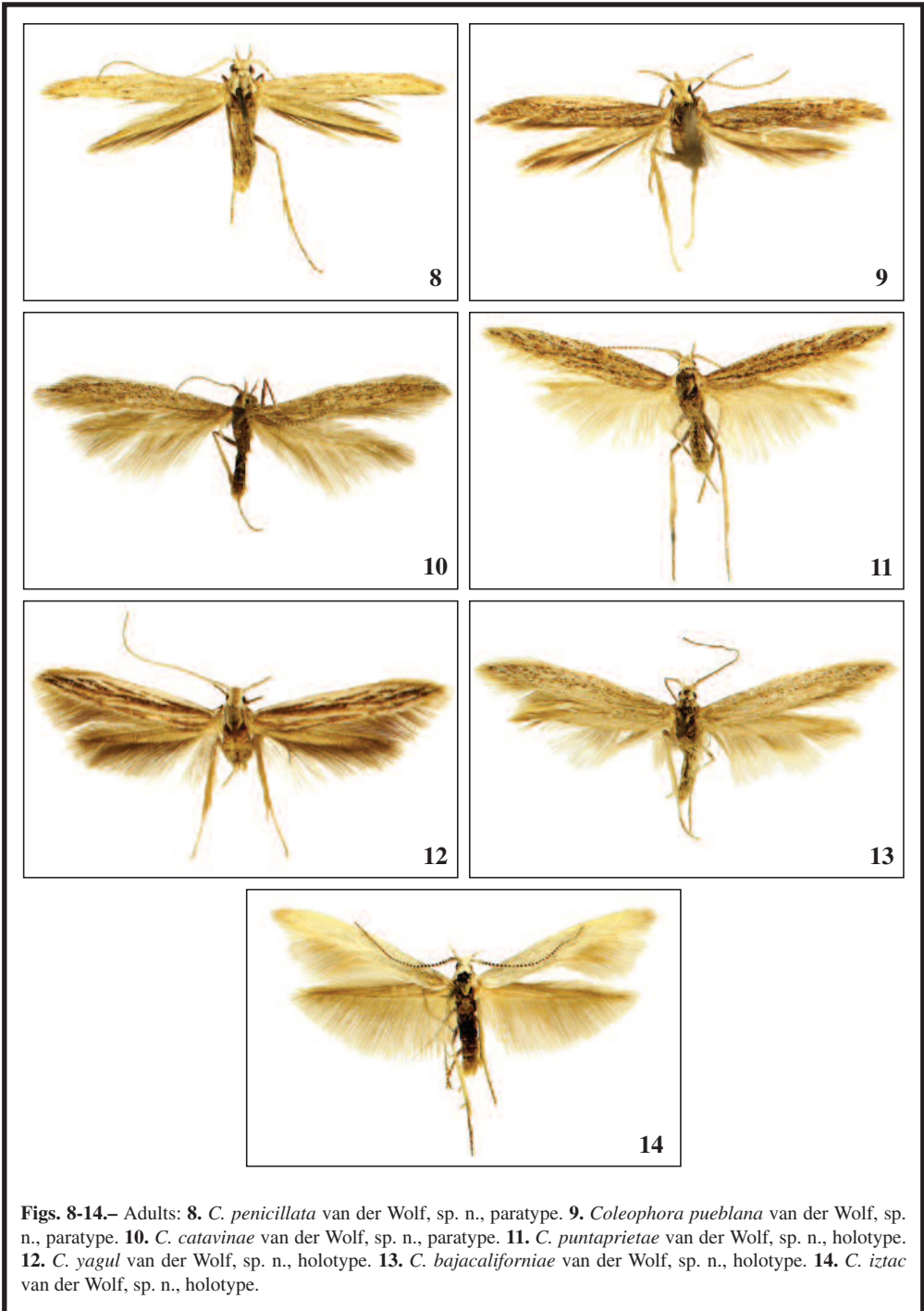
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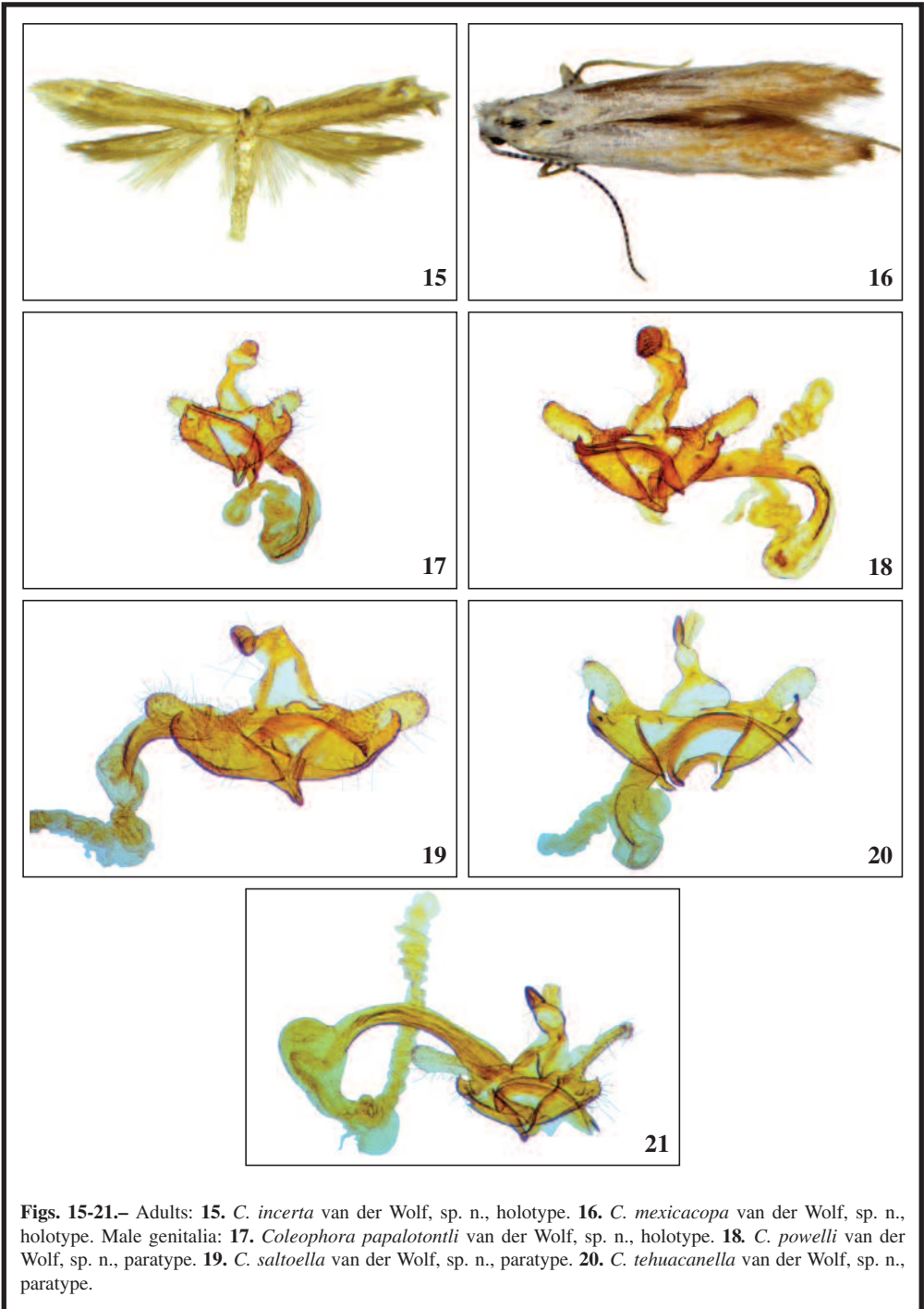
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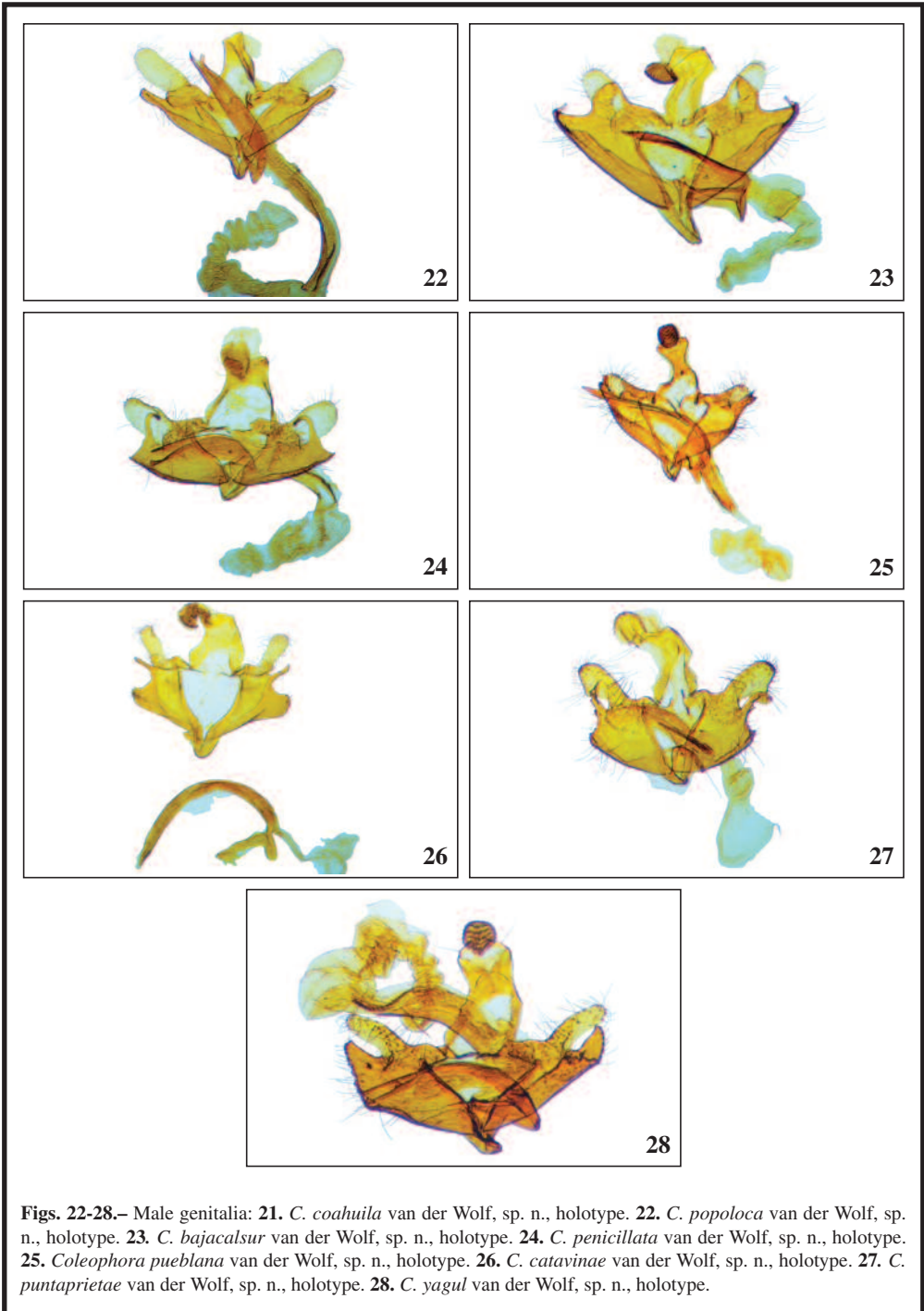




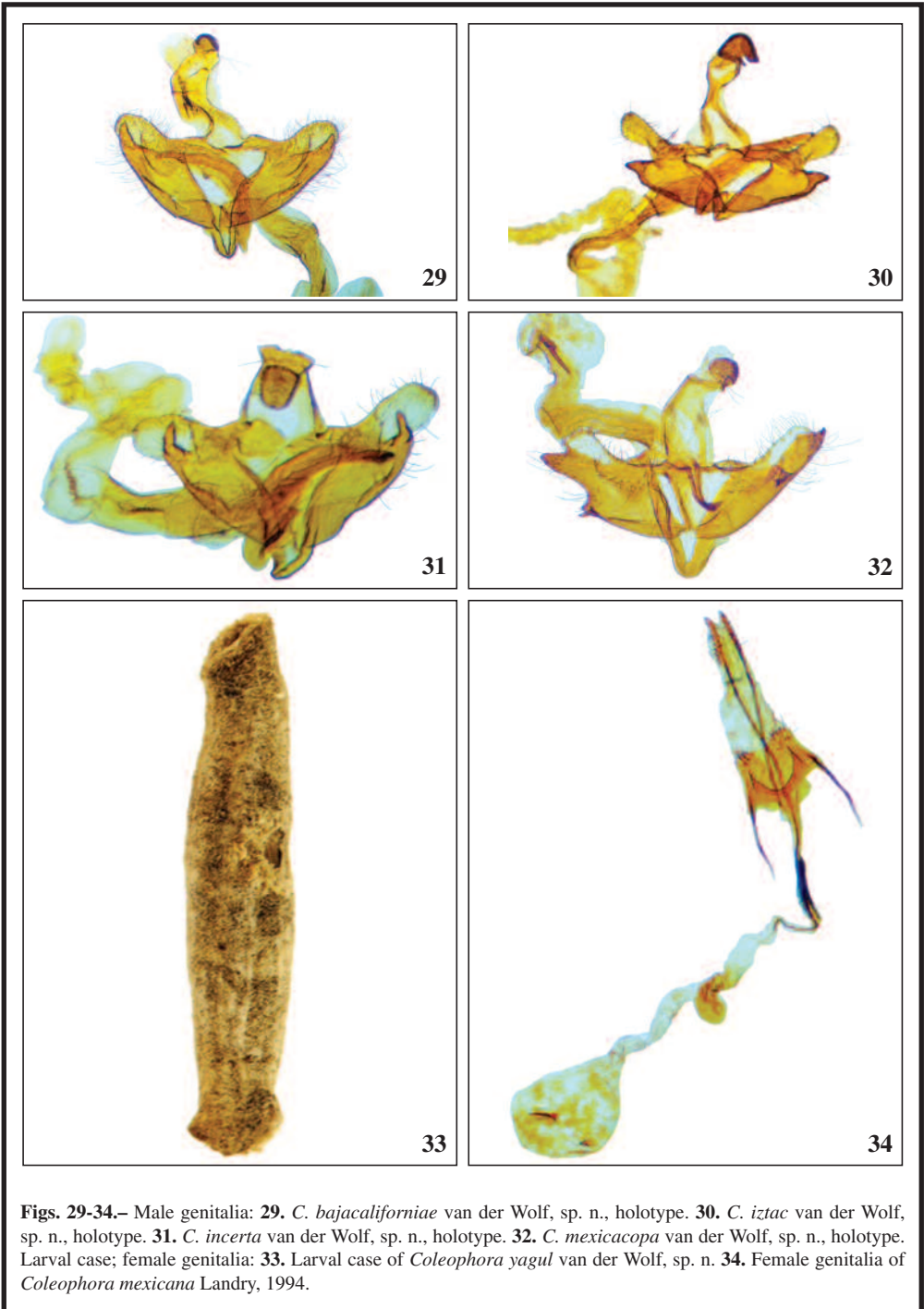


**Figs. 15-21.**— Adults: **15.** *C. incerta* van der Wolf, sp. n., holotype. **16.** *C. mexicacopa* van der Wolf, sp. n., holotype. Male genitalia: **17.** *Coleophora papalotontli* van der Wolf, sp. n., holotype. **18.** *C. powelli* van der Wolf, sp. n., paratype. **19.** *C. saltoella* van der Wolf, sp. n., paratype. **20.** *C. tehuacanella* van der Wolf, sp. n., paratype.









**Figs. 29-34.**— Male genitalia: **29.** *C. bajacaliforniae* van der Wolf, sp. n., holotype. **30.** *C. iztac* van der Wolf, sp. n., holotype. **31.** *C. incerta* van der Wolf, sp. n., holotype. **32.** *C. mexicacopa* van der Wolf, sp. n., holotype. Larval case; female genitalia: **33.** Larval case of *Coleophora yagul* van der Wolf, sp. n. **34.** Female genitalia of *Coleophora mexicana* Landry, 1994.