Eight new chyromyid species from Spain (Diptera, Chyromyidae)

Miguel Carles-Tolrá

ABSTRACT

Eight new species of Chyromyidae are described from Spain. Seven belong to the genus *Aphaniosoma* Becker, namely *A. acutum* sp.n., *A. blascoi* sp.n., *A. ebejeri* sp.n., *A. micromacro* sp.n., *A. retuertensis* sp.n., *A. serpens* sp.n. and *A. serratum* sp.n., and one to the genus *Gymnochiromyia* Hendel, namely *G. homobifida* sp.n.

Key words: Diptera, Chyromyidae, new species, *Aphaniosoma*, *Gymnochiromyia*, Spain.

RESUMEN

Ocho especies nuevas de chyrómidos de España (Díptera, Chyromyidae).

Se describen ocho especies nuevas de Chyromyidae de España. Siete pertenecen al género *Aphaniosoma* Becker, a saber *A. acutum* sp.n., *A. blascoi* sp.n., *A. ebejeri* sp.n., *A. micromacro* sp.n., *A. retuertensis* sp.n., *A. serpens* sp.n. y *A. serratum* sp.n., y una al género *Gymnochiromyia* Hendel, a saber *G. homobifida* sp.n.

Palabras clave: Diptera, Chyromyidae, especies nuevas, *Aphaniosoma*, *Gymnochiromyia*, España.

INTRODUCTION

Chyromyidae are delicate, very small to mediumsized (0.5-8.0 mm) flies, mostly yellow with pale chaetotaxy and clear wings. Occasionally they have gray or black markings on thorax or abdomen. Adults are frequently collected on flowers, especially in dry and saline areas. This family comprises 4 genera, 2 of which are included in this paper: *Aphaniosoma* Becker (1903) and *Gymnochiromyia* Hendel (1933).

*Aphaniosoma* is a genus of very small flies. It has a worldwide distribution and generally may be found in marshes and near water bodies. Their diversity and number increases in semiarid regions, especially in coastal areas. About 70 species have been described around the world, more than 50 are known to occur in the Palaearctic Region (Ebejer, 1998a).
*Gymnochiromyia* is a small genus inhabiting dry sand dunes as well as woodland. They are more frequent in saline and coastal localities. There are only 13 species described, 6 of them from the Palearctic region (EBEJER, 1998b).

Following with the study of Iberian Chyromyidae (CARLES-TOLRÁ, 1992, 1997, 2001; CARLES-TOLRÁ et al. 2001, in press) we present here the description of the new species which were found. Altogether, 31 species of Chyromyidae have been recorded up to now from the Iberian Peninsula and Balearic Islands.

**MATERIAL AND METHODS**

The dipterological material studied in this paper (933 specimens) comes from three sources:

1) Material collected by Mr. J. Blasco in Retuerta de Pina (Pina de Ebro) by means of various sampling techniques (sweeping, Malaise trap, coloured dishes, etc.). Retuerta de Pina is a very arid zone included in Los Monegros, northeastern Spain. The new species were mainly collected by sweeping of vegetation: *Atriplex halimus*, *Osyris alba*, *Reseda lutea*, *Retama sphaerocarpa*, *Salsola vermiculata*, *Suaeda vera*, *Suaedetum verae*, *Tamarix canariensis*. For more details see Carles-Tolrá y Blasco-Zumeta (in press).

2) Material collected by Dr. A. Baz in the province of Madrid by Malaise trap.

3) Material collected by the author in Ibiza (Balearic Islands) on Windows.

**RESULTS**

As a result of the study of all the above material 8 species of Chyromyidae new to science have been found: 7 belonging to the genus *Aphaniosoma* Becker and 1 to *Gymnochiromyia* Hendel. These species are described below and the collecting methods are indicated for each.

Chaetotaxy abbreviations: acrs = acrostichal, dc = dorsocentral, hu = humeral, ia = intraalar, mspl = mesopleural, ntpl = notopleural, oc = ocellar, ors = orbital, post = postalar, posthu = posthumeral, postt = posttural, prea = prealar, prescut = prescutellar, prea = prealar, prescut = prescutellar, presut = presutural, post = postverticals, scut =scutellar, stpl = sternopleural, supraa = supraalar, vte = outer vertical, vti = inner vertical.

*Aphaniosoma acuíum* sp.n.


Eight new chyromid species from Spain

1 posthu, 1 posta, ia in a regular row, posterior ia bristle long, acrs in 2 rows, some additional external acrs present, prescut acrs absent, dc row with short bristles, next to last one somewhat longer, only posterior one very long, 2 scut, 1 posterior mspl (with few posterior minute hairs), 1 stpl.

Legs dusky yellow, posterior coxa brownish. 5th tarsal segment of all legs brownish.

Wing hyaline, costal margin with very few irregular dorsal minute spines. Veins R4+5 and M1+2 convergent towards apex. Haltere whitish.

Abdomen with bristles and hairs pale. Tergites with short hairs. Tergites 1-3 brownish, poorly sclerotized, tergites 4-6 (Figs 1,2) markedly sclerotized, dark brown; tergite 5 strongly modified, posterior margin convex laterally and with an acutely pointed and elongated ventral margin, posterolateral hairs long; tergite 6 with a long ventral pointed prolongation. Sternite 3 (Fig. 3) reduced, subquadrate, with a distinct dark central stripe; sternite 4 (Fig. 4) divided into two S-shaped small sclerites.

Length: 1.2-1.4mm.

Female unknown.


The type material is preserved in alcohol. The holotype and 2♂ are deposited in the author's collection and 1♂ paratype is in the Museo de Zoología (Barcelona). Total: 4♂ 6♀.

Discussion: Aphaniosoma acutum sp.n. keys out to A. approximatum Becker (1903) in EBEJER's (1998a) paper, but they differ in tergites 5 and 6, and in the hypopygium.

Distribution: hitherto known only from northeastern Spain.

Biology: unknown. All the specimens were collected in June by sweeping on different plants.

Etymology: the specific name comes from the Latin word “acutus” (= pointed, sharp) and refers to the pointed prolongation of tergite 6.

Aphaniosoma blascoi sp.n.


Legs yellow, fifth tarsal joint of all tarsi brownish.

Wing hyaline. Veins R4+5 and M1+2 convergent towards apex. Haltere yellowish.

Abdomen yellowish. Tergites 2-5 brownish anteromedially. Tergite 6 (Fig. 5) narrow. First sternites very pale, yellowish. Sternite 4 (Figs 6,7) brown, round with a posterior projection, duckshaped in lateral view. Epandrium small (Fig. 5). Paraphallic
process (Figs 5,6) curved apically, blackish, contrasting with the other genital structures. Length: 1.5-1.6 mm.

Female unknown.

**Type material:** Holotype ♂: SPAIN: Zaragoza: Pina de Ebro, Retuerta de Pina, 28.5.1992 (T. canariensis).

Paratype: 9.6.1991 1♂ (saline area near T. canariensis). The type material is preserved in alcohol. The holotype is deposited in the author's collection and 1♂ paratype is in the Museo de Zoología (Barcelona). Total: 2♂.

**Discussion:** Aphaniosoma blascoi sp.n. keys out to A. eminens Ebejer (1995) in EBEJER's (1998a) paper. The species differ in the colour of the antennae, sternite 4 and hypopygium.

**Distribution:** hitherto known only from northeastern Spain.

**Biology:** unknown. The specimens were collected in May and June by sweeping on plants.

**Etymology:** I dedicate this new species to Mr. Javier Blasco for his kindness in sending me this interesting dipterological material.

Aphaniosoma ebejeri sp.n.


Thorax brown. Mesonotum brown in front of scutellum, with 3 pairs of dark brown longitudinal stripes: the innermost stripe not reaching the level of posterior dc bristle, the middle stripe reaching posterior dc, and the external stripe reaching postalar bristle. Scutellum brown, somewhat darker laterobasally. Humeral callus and notopleura brownish. Hypopleuron brown, dark brown posteriorly. Pteropleuron brown, darker in the middle. Mesopleuron brown anteriorly and in the middle. Sternopleuron brown above, dark brown below. Metanotum dark brown. Chaetotaxy: 1 hu, 2 ntpl, 1 posthu, 1 posta, 1a in an irregular row, no long posterior 1a bristle, acrs in 2 rows, some additional external acrs present, prescut acrs absent, dc row with short bristles, posterior one very long, 2 scut, 1 posterior mspl with few posterior minute hairs, 1 stpl.

Legs orangish, posterior coxa brownish. 5th tarsal joint of all tarsi brownish. Mid and hind tarsis with strong apicoventral spines.

Wing hyaline, costal margin with very few irregular dorsal minute spines. Veins R4+5 and M1+2 convergent towards apex. Haltere whitish.

Abdomen brown, last tergites darker. Tergites well sclerotized. Tergites 3-6 (Fig. 8) with pointed anterior corners; tergite 5 (Fig. 8) also with a posterolateral rounded corner with long hairs. Sternite 5 (Fig. 9) with a posterolateral prolongation. Epandrium (Fig. 8) well sclerotized, surstylus blackish, curved backwards. Cercus (Fig. 8) strongly sclerotized, with a ventral pointed prolongation, curved forwards, forming with the surstylus the shape of a crab's claw (Fig. 8). Aedeagus (Fig. 8) well sclerotized, brown.

Female as in the male. Mesopleuron rarely clearer in the middle. Scutellum and
Eight new chyromid species from Spain

mesonotum in front of it rarely yellow. All tergites normal, anterior corners not pointed. Sternite 7 (Fig. 10) divided into two bracketlike sclerites.

Length: male 1.2-1.5 mm, female 1.4-1.8 mm.

**Type material:** Holotype ♂: SPAIN: Zaragoza: Pina de Ebro, Retuerta de Pina, 9.6.1991 (saline area near T. canariensis).


**Discussion:** Aphaniosoma ebejeri sp.n. keys out to A. socium Collin (1949) in EBEJER’S (1998a) paper. The species differ in tergite 5, sternite 5 and hypopygium, especially the epandrium and cerci.

**Distribution:** hitherto known only from northeastern Spain.

**Biology:** unknown. Most specimens were collected by sweeping on plants, others with coloured dishes and Malaise trap. The specimens were collected from April to June.

**Etymology:** I want to dedicate this new species to Dr. Martin J. Ebejer as gratitude for his invaluable help and collaboration.

*Aphaniosoma micromacro* sp.n.


Thorax pale orange. Mesonotum with 3 pairs of brown to dark brown longitudinal stripes: the innermost stripe not reaching the level of posterior de bristle, the middle stripe reaching posterior de, and the external stripe reaching postalar bristle; innermost pair of stripes arising from a distinct darker brown spot just above the neck. Scutellum pale orange. Metanotum dark brown. Mesopleuron haired, pale orange. Sternopteron pale orange, sometimes brownish basally. Pteropleuron pale orange, with a brown spot in the middle. Hypopleuron pale orange, with a brownish to brown posterior spot. Chaetotaxy: 1 hu, 2 ntpl, 1 short posthu, 1 posta, ia bristles short, in a regular row, acrs in 2 rows, prescut ac present, de row with short bristles, penultimate one long, last one very long, 2 scut, 1 posterior mspl, 1 stpl.

Legs pale orange. 5th segment of fore tarsus strongly modified (Figs 11,12): twice wide than forth segment, dark brown, claws reduced, minute, pulvilli very developed, dorsal hairs long, distinct, but specially the central one, which is longer and stronger. 5th segment of mid and hind tarsi normal, brownish.

Wing hyaline, costal spines absent. Veins R4+5 and M1+2 converging towards apex. Haltere orangish.
Abdomen yelloworangish, tergites dark brown in the middle, anterior three tergites clearer. Tergite 4 (Fig. 13) strongly modified, with a distinct posterolateral rounded expansion.

Female as in the male. 5th segment of fore tarsus normal, not modified, generally darker than the 5th segment of mid and posterior tarsi. All tergites normal, brown dorsally. Tergite 7 divided. Sternite 7 (Fig. 14) poorly sclerotized, very small, pilose. Sternite 8 (Fig. 14) divided into two very small, poorly sclerotized, sclerites.

Length: male 1.2-1.4 mm, female 1.5-1.9 mm.

**Type material:** Holotype♂: Baleares: Ibiza, Punta Arabí, 27.6.1988 (hotel, at bar window).

**Paratypes:** Ibiza: Punta Arabí, 27.6.1988 1♂ 2♀ (hotel, bar window), 23.6.1989 1♂ 2♀ (hotel, bar window), 25.6.1989 4♂ 10♀ (hotel, bar window), 27.6.1989 2♀ (hotel, reception window). Formentera: Es Pujols, 26.6.1989 3♀ (beach, bar window). The type material is preserved in alcohol. The holotype and 9♂ 6♀ paratypes are deposited in the author’s collection and 2♂ 3♀ paratypes are in Ebejer’s collection and 1♂ 2♀ paratype are in the Museo de Zoología (Barcelona). Total 13♂ 40♀.

**Discussion:** *Aphaniosoma micromacro* sp.n. keys out to *A. melitensis* Ebejer (1993) in EBEJER’s (1998a) paper. The species differ in the 5th segment of fore tarsus, in tergite 4 and in the hypopygium.

**Distribution:** hitherto known only from the Balearic Islands (Spain).

**Biology:** unknown. All the specimens were collected in June on windows.

**Etymology:** the specific name comes from the Greek words “mikrós” (= small) and “makrós” (= large) and refers to the strongly modification of 5th joint of fore tarsus with minute claws and very developed pulvilli.

*Aphaniosoma retuertensis* sp.n.


Thorax pale orange. Mesonotum with 3 pairs of brownish longitudinal stripes: the innermost stripe not reaching the level of posterior dc bristle, the middle stripe reaching posterior dc, and the external stripe reaching postalar bristle. Scutellum pale orange. Metanotum dark brown. Innermost pair of stripes arising from a distinct dark brown spot just above the neck. Mesopleuron haired. Sternopleuron darker basally. Hypopleuron with a brown posterior spot. Pteropleuron darker in the middle. Chaetotaxy: 1 hu, 2 ntpl, 1 posthu, 1 posta, ia in a regular row, posterior ia bristle short, not enlarged, acrs in 2 rows, prescut acrs absent, dc row with short bristles, penultimate bristle somewhat longer, posterior one very long, 2 scut, 1 posterior mspl, 1 stpl.

Legs pale orange. Last tarsal segment more or less slightly darkened.

Wing hyaline, costal spines regular. Veins R4+5 and M1+2 convergent towards apex. Haltere whitish.

Abdomen pale orange. Anterior margin of tergites 2-4 more or less brownish. Ter-
Eight new chyromid species from Spain

Male. Head yellow, occiput brown with a yellow border behind eye margin. Frons slightly broader than long, bristled and with 1 pair of long bristles in front of ocellar triangle. Frontal margins converging to the antennae. Ocellar triangle brown. Antenna yellow, arista glabrous, dark, clearer basally. Chaetotaxy: 2 ors, oc, vte,

Thorax yellow. Mesonotum with 3 pairs of dark brown longitudinal stripes: the innermost stripe not reaching the level of posterior dc bristle, the mid stripe reaching posterior dc, and the external stripe reaching the postalar bristle. Scutellum yellow, somewhat brownish laterobasally. Metanotum dark brown. Humeral callus and notopleura yellow. Mesopleuron yellow, with a small anterior and basal spot. Sternopleuron brown in its basal half. Hypopleuron yellow, with a posterior brown spot. Pteropleuron yellow, with a narrow vertical brown spot. Chaetotaxy: 1 hu, 2 ntpl, 1 posthu, 1 posta, ia in a regular row, posterior ia bristle long, acrs in 2 rows, prescut acrs absent, dc row with short bristles, posterior one very long, 2 scut, 1 posterior mspl with few posterior minute hairs, 1 stpl.

Legs yellow. Mid tarsal segments with strong apicoventral spines. Tarsi of all legs darkening towards apex.

Wing hyaline, costal margin with very few irregular dorsal minute spines. Veins R4+5 and M1+2 converging towards apex. Haltere whitish.

Abdomen dark brown, anterior tergites clearer. Tergite 5 (Figs 24, 25) with a distinct S-shaped posterolateral prolongation. Tergite 6 pointed anterolaterally (Fig. 25). Sternites 2-5 as in Fig. 26, sternite 4 divided, darkened, sternite 5 large, with a pair of posterior prolongations. Aedeagus complex (Fig. 27).

Female as the male, but dusty yellow. Tergites brown, abdomen darkening to the apex. Tergite 7 (Fig. 28) divided into two lateral brown spots. Sternite 7 (Fig. 29) small, pilose. Sternite 8 (Fig. 29) small, concave posteriorly.

Length: male 1.2-1.5 mm, female 1.3-1.8 mm.

**Type material**: Holotype♂: SPAIN: Zaragoza: Pina de Ebro, Retuerta de Pina, 9.6.1991 (saline area near T. canariensis).


**Discussion**: Aphaniosoma serpens sp.n. keys out to A. sodalis Collin (1949) in EBEJER’s (1998a) paper. The species differ in tergite 5 and in the hypopygium.

**Distribution**: hitherto known only from northeastern Spain.

**Biology**: unknown. All the specimens were collected from May to July by sweeping on different plants.

**Etymology**: the specific name comes from the Latin word “serpens” (= snake) and refers to the long S-shaped prolongation of tergite 5 which curves like a snake.

**Aphaniosoma serratum** sp.n.

Male. Head yelloworangish, occiput yelloworangish, clearer in the middle. Frons as
Eight new chryomid species from Spain


Thorax yellow/orangish. Mesonotum with 3 pairs of pale brown longitudinal stripes: the innermost stripe not reaching the level of posterior dc bristle, the mid stripe reaching posterior dc, and the external stripe reaching the postalar bristle (median and lateral stripes sometimes darker apically). Scutellum yellow/orangish. Metanotum dark brown. Innermost pair of stripes arising from a distinct dark brown spot just above the neck. Mesopleuron haired. Sternopleuron slightly darker basally. Hypopleuron darker posteriorly. Pteropleuron darker in the middle. Chaetotaxy: 1 hu, 2 ntpl, 1 posthu, ia in a regular row, posterior one long, 1 posta, acrs in 2 rows, prescut acrs absent, 1+3 dc, presut dc longer than the first postsut dc, posterior dc the longest, some small additional postsut dc may be present, 2 scut, 1 posterior mspl, 1 stpl.

Legs pale orange. Last tarsal segment brownish. Hind trochanter (Figs 30-32) with a ventral protuberance, slightly concave posteromedially, and bordered by dense, short, black spinules, posterior side with more or less straight spinules, basal ones longer.

Wing hyaline, costal spines regular. Veins R4+5 and M1+2 convergent towards apex. Halteres whitish.

Abdomen pale orange. Anterior margin of tergites 2-4 brown. Sternite 5 (Figs 33,34) strongly modified, with a pair of rows of black spines. Sternite 6 (Figs 33,34) fused with tergite 6, strongly modified, with a pair of rows of black spines and a pointed backwards protuberance. Surstylus (Figs 33,34) extremely long, apex curved and with a short spine. Aedeagus membranous posteriorly at the apex (Fig. 35).

Female as in the male. Rarely mesonotal stripes dark brown. Hind trochanter normal, protuberance absent. Tergites brown anterodorsally and with a small lateral brown spot, tergites 6-7 divided. Sternite 6 (Fig. 36) very small, desclerotized, pilose. Sternite 7 (Fig. 36) small, pilose, with two small brown spots between it and sternite 8 (Fig. 36).

Length: male 1.6-1.8, female 1.6-2.4 mm.


Discussion: Aphaniosoma serratum sp.n. keys out to A. spatulatum Ebejer (1993) in EBEJER's (1998a) paper. The species differ in the hind trochanter and in the hypopygium.

Distribution: hitherto known only from northeastern Spain.

Biology: unknown. All specimens were collected from May to July by sweeping on plants.
Etymology: the specific name comes from the Latin word “serra” (= saw) and refers to the rows of minute spines of sternites 5 and 6.

**Gymnochiromyia homobifida** sp.n.


Thorax yellow. Mesonotum with 3 pairs of stripes: 1st pair, between de rows, orange (brown just above neck) and reaching level of posterior notopleural. 2nd pair outside de rows and reaching posterior de, presutural part orange, postsutural part distinctly brown. 3rd pair (below intraalar row) distinctly brown, extending from transverse suture to postalar bristle. Scutellum yellowish, brownish laterobasally. Metanotum completely brown below the scutellum and with a vertical distinct brown spot just in front of haltere. Mesopleuron pilose posteriorly. Sternopleuron orangish in its half basal part. Hypopleuron yellow with a distinct brown posterior spot. Chaetotaxy: 2 hu (inner shorter), 2 ntpl, 1 posthu, 1 long prescut dc, with 1-2 much shorter ones in front, presut dc very small, acrs in 4 rows at level of the transverse suture, prescut pair slightly longer, 1 prea, 1 supraa, 1 posta, ia row with short hairs equal in length to the acrs, 2 scut, apical ones almost parallel and twice the length of the scutellum, 1 mspl, 1 stpl. Dorsal and pleural bristles dark brown, small hairs paler.

Wing clear, veins pale brownish. Haltere whitish.

Legs yellow, 5th segment of all tarsi brown. Fore femur with a ventral row of long dark hairs, an irregular posterodorsal row also present.

Abdomen orangish. Tergites with brown transverse bands on anterior margin, clearer in the middle. Epandrium (Fig. 37) brownish, distinctly convex, with short hairs, inferior margin with a row of 3-4 long hairs, the most posterior one distinctly longer. Hyypandrium (Fig. 37) well sclerotized. Phallapodeme (Fig. 37) slightly curved. Surstylus (Fig. 37) bifid, both branches convergent, posterior branch slightly shorter than anterior one. Distiphallus without a circular sclerotized rim at apex. Gonostylus (Fig. 37) slightly S-shaped, with short hairs in the middle. Bacilliform sclerite as in Figs 38, 39.

Female as in male except that: mesonotal stripes less distinct, clearer, sometimes orangish. Hypopleural posterior spot much clearer, orangish. Metanotal spot below scutellum sometimes smaller, but distinct. Spot in front of haltere much paler, orangish. 5th segment of all tarsi brown to brownish. Abdomen pale orange, anterior transversal stripes divided or entire. Sternite 7 (Fig. 40) orangish, divided, oval, pilose. Sternite 8 (Fig. 41) small, distinct, posterior margin darkened and with minute hairs.

Total body length: male: 1.7 mm; females: 2.0-2.3 mm.

**Type material:** Holotype♂: SPAIN: Madrid: Rascafría, Puerto de la Morcuera, 12-20.7.1999, Malaise trap in an oak wood (Quercus pyrenaica), 1450 msl, A.Baz leg.

**Paratypes:** 10♀♀ as the holotype. Type material preserved in alcohol. The holotype and 9 partypes are deposited in the author’s collection and 1♂ is in the Museo de Zoología (Barcelona). Total: 1♂ 10♀♀.

**Discussion:** *Gymnochiromyia homobifida* sp.n. keys out to *G. fallax* Ebejer (1998) in EBEJER's (1998b) paper, both species differ in the colour of the metanotum, meso-
pleural and sternopleural bristles, and in the hypopygium. The surstylus of *G. fallax* is also bifid, but the posterior branch is much shorter than the anterior one. Furthermore, the female of *G. fallax* differs in sternite 8 (Fig. 42): small, narrow, glabrous and posterior margin not darkened.

**Distribution:** hitherto known only from central Spain.

**Biology:** unknown. All the specimens were collected in July by Malaise trap in an oak wood (*Quercus pyrenaica*) at 1450 m above sea level.

**Etymology:** the specific name comes from Greek “hemos” (= same, similar) and Latin “bifida” (= forked, bifid) and refers to the surstylus, which is forked into two similar branches.

**ACKNOWLEDGEMENTS**

Many thanks to Mr. Javier Blasco (Pina de Ebro, Zaragoza) and Dr. Arturo Baz (Universidad de Alcalá, Madrid) for sending me for study this so interesting material from Retuerta de Pina (Los Monegros) and Madrid, respectively. I am especially indebted to Dr. Martin J. Ebejer (Balzan, Malta) for his help, with confirming the new species, reviewing this manuscript and for making very useful comments. Many thanks also to Mrs Joana Danés for her help with Greek and Latin nomenclature.

**REFERENCES**


Fecha de recepción: 23 marzo 2001
Fecha de aceptación: 12 julio 2001

Miguel Carles-Tolrá. Avda. Príncipe de Asturias 30, ático 1 - E-08012 Barcelona - España
Eight new chyromid species from Spain

Figs 1-4. *Aphaniosoma acutum* sp.n. (male): 1) hypopygium in lateral view, 2) hypopygium in ventral view, 3) sternite 3 in ventral view, 4) sternite 4 in ventral view.
Scale bar = 0.1 mm.

Figs 5-7. *Aphaniosoma blascoi* sp.n. (male): 5) hypopygium in lateral view, 6) hypopygium in ventral view, 7) sternite 4 in lateral view.
Scale bar = 0.1 mm.
Figs 8-10. *Aphaniosoma ebejeri* sp.n.: 8) hypopygium in lateral view, 9) sternite 5 in ventral view, 10) female sternite 7 in ventral view.
Scales bar = 0.1 mm.

Figs 11-14. *Aphaniosoma micromacro* sp.n.: 11) male fifth joint of fore tarsus in dorsal view, 12) male fifth joint of fore tarsus in lateral view, 13) tergites 4-5 in lateral view, 14) female sternites 7-8 in ventral view.
Scales bar = 0.1 mm.
Figs 15-23. *Aphaniosoma retuertensis* sp.n.: 15) hypopygium in lateral view, 16) sternites 5+6 in lateral view, 17) sternites 5+6 in ventral view, 18) hypopygium, with aedeagus evaginated, in lateral view, 19) sternites 5+6, aedeagus and paraphallic processes in ventral view, 20) female tergite 7 in dorsal view, 21) female tergite 7 in lateral view, 22) female tergite 7 in posterior view, 23) female sternites 7-8 and cerci in ventral view.

Scales bar = 0.1 mm.
Figs 24-29. *Aphaniosoma serpens* sp.n.: 24) hypopygium in lateral view, 25) hypopygium in ventral view, 26) sternites 2-5 in ventral view, 27) hypopygium, with aedeagus evaginated, in lateral view, 28) female tergite 7 in dorsal view, 29) female sternites 7-8 in ventral view.

Scales bar = 0.1 mm.
Eight new chyromid species from Spain

Figs 30-36. *Aphaniosoma serratum* sp.n.: 30) anterior side of male hind trochanter, 31) male hind trochanter in lateral view, 32) posterior side of male hind trochanter, 33) hypopygium in lateral view, 34) hypopygium in ventral view, 35) aedeagus in lateral view, 36) female sternites 6-8 and cerci in ventral view.

Scales bar = 0.1 mm.
Figs 37-42. Figs 37-41. _Gymnochiromyia homobifida_ sp.n.: 37) hypopygium in lateral view, 38) bacilliform sclerites in posterior view, 39) bacilliform sclerites in ventral view, 40) female sternite 7 (and 8) in ventral view, 41) female sternite 8 in ventral view. Fig. 42. _Gymnochiromyia fallax_ Ebejer: female sternite 8 in ventral view. Scales bar = 0.1 mm.