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## Revision of the *Tinodes pallidulus* species group in Turkey with descriptions of four new species (Trichoptera, Psychomyiidae)

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**Abstract.** The males of the *Tinodes pallidulus* species group found in Turkey are revised, and the following new species are described and illustrated: *Tinodes devrekensis* sp. n. (Zonguldak), *T. izginehirae* sp. n. (İstanbul), *T. ihlaraensis* sp. n. (Aksaray), and *T. ofensis* sp. n. (Trabzon). Brief descriptions and illustrations of *T. pallidulus* MCLACHLAN 1878, *T. popovi* KUMANSKI 1975, *T. conjuncta* MARTYNOV 1913, *T. rauschi* MALICKY 1975 are given. A key to the males, diagnosis, new data, and a sketch map of the distributions of the species are provided.

**Key words.** Trichoptera, caddisflies, taxonomy, new species, *pallidulus* species group, faunistic, distribution, Turkey.

The *Tinodes pallidulus* species group represented by 22 species and 1 subspecies, including the new species described in the present paper, occurs mostly in the eastern Mediterranean region (Table 1). This species group is represented by 8 species in Greece and the Aegean islands (MALICKY, 2005), 2 species in the Caucasus, and 1 species in Bulgaria. Most of the species are endemic or are found in a small area in the region. In Turkey, 12 species and 1 subspecies are found, including the 4 new species described in this paper.

*Tinodes pallidulus* MCLACHLAN 1878 (France) and *T. manni* MCLACHLAN 1878 (Turkey) were the first species of the group described (MCLACHLAN, 1874-1878). *T. pallidulus* is widely distributed in Europe, but is not found in northern Europe, the Iberian Peninsula and Italy, whereas *T. manni* is only found in Turkey. Later, *T. janssensii* JACQUEMART 1957 (Greece) (JACQUEMART, 1957), *T. popovi* KUMANSKI 1975 (Bulgaria), and *T. rauschi* MALICKY 1975 (Chios, Samos, Lesbos) (KUMANSKI & MALICKY, 1975; MALICKY, 2005), and some other species from Greece and Turkey were described (MALICKY, 1977, 1984; SIPAHILER, 1992, 1994).

In the present study, specimens belonging to the *pallidulus* species group collected over a period of nearly 30 years from Turkey are revised and 4 new species described; brief descriptions of *T. pallidulus* MCLACHLAN 1878, *T. popovi* KUMANSKI 1975, *T. conjuncta* MARTYNOV 1913, *T. rauschi* MALICKY 1975, and *T. rauschi marmaris* MALICKY & SIPAHILER 1993 and the distributions of the species are given (Fig. 1).

### Features of the *pallidulus* species group

The *pallidulus* species group is characterized by a thin median prolongation of tergite IX, of which the sides are sclerotized, and the shape of the inferior appendage, of which the coxopodite is broad on the basal part, becoming a narrow prolongation on the distal part of the dorsal edge; the harpago is short, mostly divided into two pointed lobes on the apical edge; the inner basal appendage is composed of a basal plate with an anterior apodeme and a pair of posterior prolongations, which are long and curved towards ventral; the basal plate has 1-3 pairs of spines located at the base and mostly on the posterior edge and ventral part of the posterior prolongations; the parameres of the phallic apparatus possess numerous spines.

### Key to males of the *Tinodes pallidulus* group in Turkey

- 1- Inner basal appendage with one spine pair at base .....2  
     Inner basal appendage has more than one spine pair at base.....3
- 2- Inner basal appendage has two pairs of small spines on posterior prolongations; ventral lobe of inferior appendage with two short and thin lobes (MALICKY, 1977)..... *T. kypselos*  
     Inner basal appendage without spines on posterior prolongations.....4
- 3- Inner basal appendage with two pairs of spines at base.....5  
     Inner basal appendage with three pairs of spines at base; one pair located at base of posterior prolongations, two pairs found on posterior edge (Fig. 43)..... *T. rauschi*
- 4- Inner basal appendage with long posterior prolongations, base narrow (Fig. 39); ventral branch of inferior appendage long, broad; dorsal lobe long, ventral lobe short, connected at right angle to dorsal lobe (Fig. 34)..... *T. conjuncta*  
     - Inner basal appendage with short posterior prolongations, base large; ventral branch of inferior appendage long, margins of dorsal lobe with small teeth; ventral lobe very short, thin (SIPAHILER, 1992)..... *T. nehirae*
- 5- One pair of spines of inner basal appendage located anteriorly; second pair located on posterior edge.....6  
     - Both spine pairs located on posterior edge .....7
- 6- Anterior pair of spines long, posterior pair of spines short; ventral branch of inferior appendage short and broad, with four teeth on apical margin of ventral lobe (Malicky, 1974)..... *T. manni*  
     Anterior and posterior pair of spines long (Fig. 6); ventral branch of inferior appendages narrow, short; ventral lobe very short, pointed (Fig. 2)..... *T. devrekensis* sp. n.
- 7- Basal part of inner basal appendage very narrow, ventral edge protrudes as broad spine; posterior edge of broad spine prolonged as a curved hook; short spine pair located beneath it (Fig. 11) ..... *T. izginehirae* sp. n.  
     - Basal part of inner basal appendage broad.....8
- 8- Dorsal pair of spines shorter than ventral spine pair....9  
     - Dorsal pair of spines longer than ventral spine pair....10
- 9- Harpago of inferior appendage with additional short lobe .....11  
     Harpago of inferior appendage without additional short lobe.....12
- 10- Dorsal spine pair broad, long; ventral pair very short, pointed; ventral edge of basal part rounded; ventral branch of inferior appendage divergent on posterior edge, short (SIPAHILER, 1994)..... *T. oyae*  
     - Dorsal and ventral spine pair thin; ventral edge of basal part straight (Fig. 27); ventral branch of inferior appendage long, with short and thin lobe located on the dorsal edge (Fig. 23)..... *T. pallidulus*
- 11- Additional short lobe located on dorsal lobe of harpago of inferior appendage (Fig. 17); both spine pairs of inner basal appendage broad, long, close to each other (Fig. 22) ..... *T. ofensis* sp. n.  
     Additional short lobe located between dorsal and ventral lobe of ventral branch of inferior appendage (Fig. 28); spine pairs moderately long, dorsal spine pair thinner than ventral spine pair (Fig. 32) ..... *T. popovi*
- 12- Dorsal lobe of harpago laterally very thin and long; ventral lobe short and broad (Fig. 12) ..... *T. ihlaraensis* sp. n.

## Descriptions

### *Tinodes devrekensis* sp. n. (Figs. 2-6)

**Material.** Holotype male and paratypes (3 males, 1 female): Turkey, Zonguldak, Devrek, Ereğli direction, 195 m, 41°14'N/ 31°50'E, 23.6.2011; other paratypes: Zonguldak, Devrek, Bacakkadı, a tributary of Filyos River, 41°21'N/ 32°00'E, 22.6.2011, 1 male, 2 females; Zonguldak, Beycuma, Devrek Yassioren, Yılanlı direction, 87 m, 41°15'N/ 31°58'E, 25.6.2011, 1 male; Karabük, Safranbolu, Mencilis, 29.8.1993, 1 male, 1 female; Kastamonu, Azdavay, Cide direction, 14 km, 21.6.1996, 700 m, 4 males, 4 females; same place, 25 km, 1000 m, 21.6.1996, 1 male; Bolu, Aladağlar, Seben direction, Beşpınarlar, 7.7.2000, 2 males, 2 females; Sinop, Ayancık, 10 km south, 7.6.2002, 1 male, 1 female; Bartın, Amasra direction, Karadere, 150 m, 13.4.2004, 12 males; Bartın, Arit, Samanpazarı, 350 m, source, 24.6.2004, 2 males, 1 female; Bolu, Gerede, Aktaş, 1400 m, 3.8.2006 1 male; Bartın, Kurucaşile, Ziyaret Village, 20 km north of Ulus, 12.6.2001, 2 males, 6 females; leg. and coll. Sipahiler.

**Diagnosis.** Inner basal appendage with two pairs of spines, one pair located on the sides of base posteriorly and other pair on posterior edge laterally; harpago of the inferior appendage narrow and short; ventral lobe of harpago thin, very short.

Antennae, maxillary palps, and wings are brown, head and thorax dorsally dark brown, the coxa and the femur of the legs pale brown, tibia and tarsi brown. The length of the anterior wing of males is 4.5-5 mm, of females 5-5 mm.

**Male genitalia** (Figures 2-6). Sternite IX is almost broadly triangular, the ventral edge is sinuate, and the anterior corner is rounded laterally; in dorsal view, tergite IX is triangular, narrowing posteriorly; the side margins are strongly sclerotized, connected medially and continue as a narrow band towards posterior; the sides and the apical portion are membranous. The preanal appendages are narrower at the base, becoming somewhat broader and curved subdistally, gradually narrower towards the tips. The posterior prolongations of the inner basal appendage gradually curved towards ventral; two pairs of short basal spines, of which the ventral one is longer and rather broad located on the posterior edge, the shorter and thinner spine is located on the sides rather close to the ventral one. The coxopodite of the inferior appendage is broad at the base, the apical portion is long and narrow; in lateral view, the harpago is narrow, rather short, its apical part has two lobes of which the dorsal one is longer and broader than the ventral one, both are pointed at the apex. The parameres have numerous spines rather short and almost equal in length; there is also a pair of dorsal spines on the sides at the base, one of which is long while the other is shorter and one long spine located ventrally each side of the base.

**Remarks.** *Tinodes devrekensis* sp. n. is closely related to *T. popovi* KUMANSKI 1975 (KUMANSKI & MALICKY, 1975), but differs from this species by the following features: in lateral view, in *T. popovi* the harpago of the inferior appendage is broad and divergent on the apical portion, having two long lobes and a shorter one between them whereas in *T. devrekensis* sp. n., the harpago is narrow and apically has two lobes, of which the ventral one is very short and thin. In the

new species, a dorsal pair of basal spines is found on the side of the base of the inner basal appendage and a ventral pair is located on the posterior edge, both are close to each other, while in *T. popovi* they are both located on the posterior edge and the distance between them is greater.

### *Tinodes izginehirae* sp. n. (Figs. 7-11)

**Material.** Holotype male and paratypes (3 males 5 females): Turkey, Thrace, İstanbul, Sarıyer, Çırçır Suyu, 41°08' N, 23°03' E, 22.6.1990; other paratypes: Sakarya, Sapanca, Mahmudiye Stream, 11.6.2013, 2 males, 3 females; leg. and coll. Sipahiler.

**Diagnosis.** Inner basal appendage with two pairs of spines, of which ventral one long and broad, located on ventral corner of posterior edge, shorter and thinner spine found closely beneath it; posterior and anterior ends of basal plate laterally curved. Harpago of inferior appendage broad, short, with two pointed lobes posteriorly.

Antennae, maxillary palps, legs, and wings are pale brown. The length of the anterior wings of males is 4-5 mm, of females 4.5-5 mm.

**Male genitalia** (Figures 7-11). Sternite IX is roundly dilated anteriorly; the sides of tergite IX are rounded, the median prolongation is thin; the membranous part is dilated on the sides, becoming narrower at the apex. The preanal appendage is slightly dilated and curved near the base, gradually narrowing towards the tip. The coxopodite of the inferior appendage laterally is broad and long, triangular, the posterior portion is narrow and rather short, directed ventrally; the harpago is broad and short, its ventral edge roundly dilated; the apical lobes are equal in length, triangular, and pointed at the apex. In lateral view, the inner basal appendage is narrow at the base, possessing a large spine on each side of the ventral edge, its posteroventral corner prolonged as a thin hook; there is a thin and short spine located beneath the large spine. In dorsal view, the parameres have many spines and each has at the base a longer spine located on the ventral portion and two long spines on the dorsal part.

**Remarks.** *Tinodes izginehirae* sp. n. is closely related to *T. popovi* KUMANSKI & MALICKY 1975 (KUMANSKI & MALICKY, 1975), but differs from it by the following features: in *T. izginehirae* sp. n. the dorsal branch of the inferior appendage is almost triangular, with an almost straight ventral edge, and the apical portion is short, in the related species the basal part is shorter, with a rounded ventral edge, its apical portion is long; the inner basal appendage of the new species has a short and narrow basal plate, laterally the large spine is located near the ventral margin and the smaller one under this spine, the posterior end of the large spine protrudes as a hook; in *T. popovi* the basal plate is large, its ventral margin is rounded; the spines are found on the posterior edge.

This new species is dedicated to Ms. İzgi Nehir Hoş, the daughter of Mrs. Çağıl Hoş and Dr. Ali Celal Hoş (Hacettepe University).

*Tinodes ihlaraensis* sp. n.  
(Figs. 12-16)

**Material.** Holotype male and paratypes (2 males): Turkey, Aksaray, Ihlara Valley, Belisirma Village, 15.5.1993, 38°18'N, 34°17'E, leg. and coll. Sipahiler.

**Diagnosis.** Inner basal appendage with two pairs of long spines, of which ventral one longer; basal part narrow; ventral corner of posterior edge with curved hook. In lateral view, harpago of inferior appendage broad, dorsal lobe very long, thin; ventral lobe short and broad; median prolongation of tergite IX short and broader.

The antennae, palps, and wings are pale brown; the length of the anterior wing of the males 4-4.5 mm.

**Male genitalia** (Figures 12-16): In lateral view, sternite IX is roundly dilated on the anterior edge; the sides of tergite IX are rounded, the median prolongation is short and rather broad. The preanal appendages are slightly dilated and gradually curved near the base. In lateral view, the coxopodite of the inferior appendage is broad at the base, the apical portion is narrow and somewhat curved ventrally; the harpago is short, the apical edge has two lobes of which the dorsal lobe is very long and thin, pointed at the apex; the ventral lobe is very short, pointed at the tip. Each paramere possesses one long and one short spine at the base located dorsally and one long spine ventrally.

**Remarks.** *Tinodes ihlaraensis* sp. n. is related to *T. popovi* KUMANSKI 1975 (KUMANSKI & MALICKY, 1975), but the following differences are seen in the male genitalia: in *T. ihlaraensis* sp. n. the harpago of the inferior appendage in lateral view has a long and thin dorsal lobe and a short ventral lobe on the apical edge, whereas in the related species the dorsal lobe of the harpago is slightly longer than the ventral lobe; the inner basal appendage of *T. ihlaraensis* sp. n. has a narrow basal plate, the ventral edge is hook-shaped curved near the apical edge; the spines are rather long and located at the same level; in *T. popovi* the basal plate of the inner basal appendage is broad, the ventral edge is rounded, the spines of the posterior edge are close to each other.

*Tinodes ofensis* sp. n.  
(Figs. 17-22)

**Material.** Holotype male: Turkey, Trabzon, Of, Cumapazarı, 40°54'N, 40°19'E, 12.5.1997, leg. and coll. Sipahiler.

**Diagnosis.** Inner basal appendage with two pairs of long spines, of which ventral one longer and both spines broad at the base and close to each other; basal plate narrow, roundly dilating on the ventral edge; ventral corner of anterior edge with curved hook located at the base of apotome. In lateral view, harpago of inferior appendage narrow at base, dorsal lobe long, with additional short lobe in middle curving towards dorsal, thin; ventral lobe shorter and broader; median prolongation of tergite IX long and thin. Antennae, palps, legs, and wings are pale brown. The length of the anterior wing of male is 5 mm.

**Male genitalia** (Figs. 17-22). In dorsal view, the sides of tergite IX somewhat quadrangular, the median prolongation is long and narrow, the membranous part is also narrow; laterally the apical portion of the coxopodite of the inferior appendage is pointed at the tip curving ventrad; the harpago

is narrow at the base, apically has two long lobes, the dorsal lobe is narrow and longer than the ventral one and bears an additional lobe in the middle, which is also pointed at the tip curving dorsally. In lateral view, the basal plate of the inner basal appendage is large on the ventral portion, the ventral edge is rounded, having a curved hook located at the base of apodeme and the posterior edge has two long spines, both thicker at the base, the ventral one is longer than the dorsal spine. The paramere has long spines on the apical part, which are directed anteriorly; there are two spines at each side of the base located dorsally and one spine ventrally.

**Remarks.** *Tinodes ofensis* sp. n. is related to *T. devrekensis* sp. n., described above; the following differences are seen in the male genitalia: in *T. ofensis* sp. n. the harpago of the inferior appendage broader than that of the related species and has two long lobes with an additional curved and shorter lobe on the dorsal one, but in *T. devrekensis* sp. n. the harpago is narrower, having a shorter dorsal lobe and very short ventral lobe; the inner basal appendage of the new species in lateral view has two long spines located at the same level of the posterior edge, while in *T. devrekensis* sp. n., the dorsal spine is found on the side; the spines of the parameres of the new species are long on the apical portion, whereas in the related species the spines are shorter.

*Tinodes pallidulus* MCLACHLAN 1878  
(Figs. 23-27)

**Material examined.** Gökçeada, Şahinler Village, 3 km east, 200 m, 6.6.1992, 2 males, leg. and coll. Sipahiler.

**Diagnosis.** Inner basal appendage with two pairs of thinner spines, of which ventral one shorter and distance between them rather long; basal part broad, ventral edge almost straight; in lateral view, harpago of inferior appendage narrow and long, not divided into two lobes apically, almost folia-shaped with a few short and pointed projections on ventral edge; additional short lobe in middle of dorsal edge; median prolongation of tergite IX long and rather broad.

The antennae, wings and the body pale brown-yellowish; the length of the anterior wing of males is 5-5.5 mm.

**Male genitalia** (Figs. 23-27). Sternite IX is rounded anteriorly; the side edges of tergite IX with sclerotized bands, the median prolongation is thin, as long as tergite IX; the membranous part is dilated on the sides, narrowing at the tip. The preanal appendages are narrower at the base, somewhat dilating subdistally and gradually narrower towards the tip. In lateral view, the harpago of the inferior appendage is long, reaching the subdistal portion of the coxopodite, the ventral edge has a few small projections, there is a pointed short projection in the middle of the dorsal edge, which is large at the base. The inner basal appendage has two pairs of thin spines, the dorsal one is longer than the ventral one, the ventral one is short, reaching almost half of the length of the dorsal one; the ventral edge is straight, with two small projections on the corners. Each paramere possesses many shorter spines and two long and thicker spines located dorsally and one spine ventrally on the basal portion.

*Tinodes popovi* KUMANSKI 1975  
(Figs. 28-32)

**Material examined.** Bulgaria, Strandsha Mountains, Cerbrusa River, Kruske village, 4.8.1981, 2 males, 2 females, leg. K. Kumanski, coll. Sipahiler; Turkey, Kırklareli, Dereköy, Strandsha Mountains, 470 m, Kadinkule district, 1.8.1994, 8 males, 9 females, leg. and coll. Sipahiler.

**Diagnosis.** Inner basal appendage with two pairs of spines, of which ventral one broad at base and long, dorsal one short and thinner; basal part broad on ventral portion, ventral edge almost rounded; in lateral view, harpago of inferior appendage broad, short, apically with two lobes and additional lobe located between them; median prolongation of tergite IX long and thin.

Antennae, maxillary palps, legs and wings pale brown; the length of the anterior wing of males is 4.5-5 mm.

**Male genitalia** (Figs. 28-32). The anterior margin of sternite IX is largely rounded; in dorsal view, tergite IX is broadly triangular, the median prolongation is thin, slightly shorter than tergite IX. The preanal appendage is narrow at the base, becoming broader curving dorsally near the base and directed posteriorly towards the tip. In lateral view, the harpago of the inferior appendage is broad and short, reaching the base of the posterior prolongation of the coxopodite, the apical margin with two longer pointed lobes, which are divided, the third lobe is small, located between dorsal and ventral lobes. The inner basal appendage possesses two pairs of spines, located on the posterior edge of the basal plate; the dorsal one is somewhat shorter than the ventral one; the ventral margin is almost rounded. Each paramere has many shorter spines and two longer dorsal spines and one ventral spine located at the base.

*Tinodes conjuncta* MARTYNOV 1913  
(Figs. 33-38)

**Material examined.** Turkey, Ordu, Aybastı, Perşembe Yaylası, 2 km, north, 3.7.2007, 1 male; same place, 7.8.2007, 6 males, 2 females; Sivas, Koyulhisar, Eğriçimen Yaylası, 5.7.2007, 1600 m, 3 males, 3 females; Ordu, Mesudiye, Arpalan, 1610 m, 8.8.2007, 6 males, 1 female; Ordu, Mesudiye, Harçbeli, 10 km south of Gölköy, 8.8.2007, 1 male; Ordu, Mesudiye, Arpalan, Baldıran Stream, 5.7.2007, 1 male; Giresun Bektaş Yaylası, 2010 m, 9.8.2007 1 male; Ordu, Çambaşı Yaylası direction, 1430m, 19.8.2008, 1 male; Çambaşı, Yeşilce, Mesudiye direction, 1959 m, 19.8.2008, 1 male; Giresun, Kümbet Yaylası, Yağlıdere direction, Üçtepe district, İspir Stream, 17.8.2008, 550 m, 40°42'N, 38°37'E, 1 male, leg. and coll. Sipahiler

**Diagnosis.** Inner basal appendage with a pair of spines located on posterior edge near ventral margin; basal plate rather narrow; ventral edge straight, with small projection on anterior corner; in lateral view, harpago of inferior appendage long, apically with two lobes, dorsal lobe long and ventral lobe short; median prolongation of tergite IX long and moderately broad.

Antennae, maxillary palps, wings, and legs are brown, head and thorax dorsal dark brown; the length of the anterior wing of males is 4-4.5 mm, of females 4-5 mm.

**Male genitalia** (Figs. 33-38). Tergite IX is dorsally triangular; the coxopodite of the inferior appendage makes a right angle on the ventral margin; the dorsal lobe of the harpago is long, ventral lobe is short, both pointed at the apex; there is a triangular lobe located inside the ventral branch; the inner basal appendage has a spine at the base. Each paramere has three longer spines at the base.

**Remarks.** *T. conjuncta* MARTYNOV, 1913 has been described from the Caucasus (MARTYNOV, 1913). This species differs from its relatives in having one long spine on the posterior edge of the inner basal appendage and the inner lobe of the harpago of the inferior appendage.

*Tinodes rauschi* MALICKY 1975  
(Figs. 39-43)

**Material examined.** Nazilli, Bozdoğan, Altıntaş Village 5 km south, 600 m, Menteşe Mountains, 23.5.1992, 3 males; Muğla, Yeşilyurt, Ören, Marçal Mountain, 500 m, 27.5.1992, 5 males, 2 females; Salihli, Birgi direction, 22 km, 29.5.1988, 2 males; same place and date, 5 km, 2 males; Muğla, 18 km south of Çine, 18.5.1987, 1 male; Edremit, Kalkım, direction Balya, 3.6.1992, 5 males, 5 females; Bergama, direction Kozak, 10 km south, 350 m, 31.5.1992, 5 males; same place; 19 km, 535 m, 31.5.1992, 2 males, 2 females; İzmir, Turgutlu, Bayındır direction, Çatma Mountain, 5 km south of Kamberler Village, 600 m, 21.5.1992, 9 males, 2 females; Konya, Akşehir, Saray, Yalvaç direction Sultan Mountains, 1450 m, 7.5.1994, 1 male; same place, 11.6.1994 11 males, 4 females; Balıkesir, Edremit, Güre, Zeytinli direction, Kazdağ, Ayı Stream, 7.8.1994, 1 male; Bursa, Bandırma, Manyas, Mürüvetler Village, 4 km south, 24.5.1996, 6 males, 6 females, leg. and coll. Sipahiler.

**Diagnosis.** Inner basal appendage with three pairs of spines, one pair located on sides of base of posterior prolongation; two pairs found on posterior edge of basal plate; in lateral view, harpago of inferior appendage apically with two lobes, which are equal in length.

**Male genitalia** (Figs. 39-43). This species is characterized by having three pair of spines on the basal plate of the inner basal appendage, one pair of which is located at the base of the posterior prolongation with two on the posterior edge of the basal plate. The harpago of the inferior appendage is V-shaped excised, forming two lobes; the ventral lobe shows variations having smaller projections at the apex (MALICKY & SİPAHİLER, 1993).

*Tinodes rauschi marmoris* MALICKY & SİPAHİLER 1993

**Material examined.** Turkey, Antalya, Elmalı, Gömbe, 25.6.1988, 2 males; Muğla, Fethiye, Dereköy, 26.6.1988, 1 male; İzmir, Gümüldür, Gümüşsu, 40 m, 19.5.1992, 1 male, 3 females; Muğla, Fethiye, Ortaca direction, 30 km west of Fethiye, 17.5.1987, 1 male, 1 female; same place, 10 km west, 19.5.1987, 2 males; Muğla, Köyceğiz, Ortaca, Kocabel stream, 26.4.1987, 3 male; Yuvarlakçay, 24.5.1992, 1 male, 1 female; Fethiye, Patara, Seki Stream, 22.5.1999, 1 male, leg. and coll. Sipahiler.

**Diagnosis.** Harpago of the inferior appendage long, inner basal appendage with three pairs of spines; basal pair found at base of posterior prolongation longer than others; two pairs located on posterior edge of basal plate; ventral pair small or very small.

**Remarks.** *T. rauschi marmaris* occurs in southwestern Turkey, from Marmaris to Patara. The variations in the male genitalia were given by Malicky & Sipahiler (1993).

***Tinodes manni* MCLACHLAN 1878**

This species has been described based on two males collected from Bursa province, "Brussa, Asia Minor", and deposited in the Vienna Museum (MCLACHLAN, 1874-1880). According to the figures of the type given by MALICKY (1974), *T. manni* is characterized by having only one spine on the inner basal appendage, harpago of the inferior appendage has three small projections on the apical edge and bears shorter spines on the parameres and does not have any longer basal spines.

***Tinodes nehirae* SIPAHILER 1992**

**Material examined:** Kayseri, Yahyalı, Şelale Village, Kapuzbaşı, 22.6.1986, 1 male, 1 female; Adana, Saimbeyli, Pağnik (Kızılağaç) Village, 4.7.1990, 2 males, 2 females; Adana, Saimbeyli, Doğanbeyli direction, 28 km west, Çeralan Village, 8 males, 7 females, leg. and coll. Sipahiler.

**Diagnosis.** Dorsomedian prolongation of tergite IX short; posterior prolongation of inner basal appendage short, basal plate large, with a pair of spines located on posteroventral corner; harpago of inferior appendage with two lobes, dorsal lobe long and ventral lobe very short (Sipahiler, 1992).

***Tinodes oyae* SIPAHILER 1994**

**Material.** Turkey, Antalya, Manavgat, Beşkonak, Köprülü Kanyon, Köprüçay, 31°10' N, 37° 09' E, 26.3.1993 (Types) (SIPAHILER, 1994); same place, 21.5.2003, 12 males, 2 females, leg. and coll. Sipahiler.

**Diagnosis.** Posterior prolongation of inner basal appendage thin and long, basal plate large, ventrally rounded, with two pairs of spines located on posterior edge; dorsal pair very long and broad, ventral pair short and thin; harpago of inferior appendage with two large lobes, dorsal lobe long, directed upward and ventral lobe shorter, directed posteriorly (SIPAHILER, 1994).

***Tinodes kypselos* MALICKY 1977**

Holotype male: Turkey, 50 km west of Muş, 12.6.1976, leg. Holzschuh & Ressler, coll. Malicky (MALICKY, 1977).

**Diagnosis.** Inner basal appendage possesses two pairs of short spines on the proximal prolongations, one pair of which located near the base and the second pair located approximately 1/3 of the length of the prolongation. The second segment of the inferior appendage has two narrow and pointed lobes.

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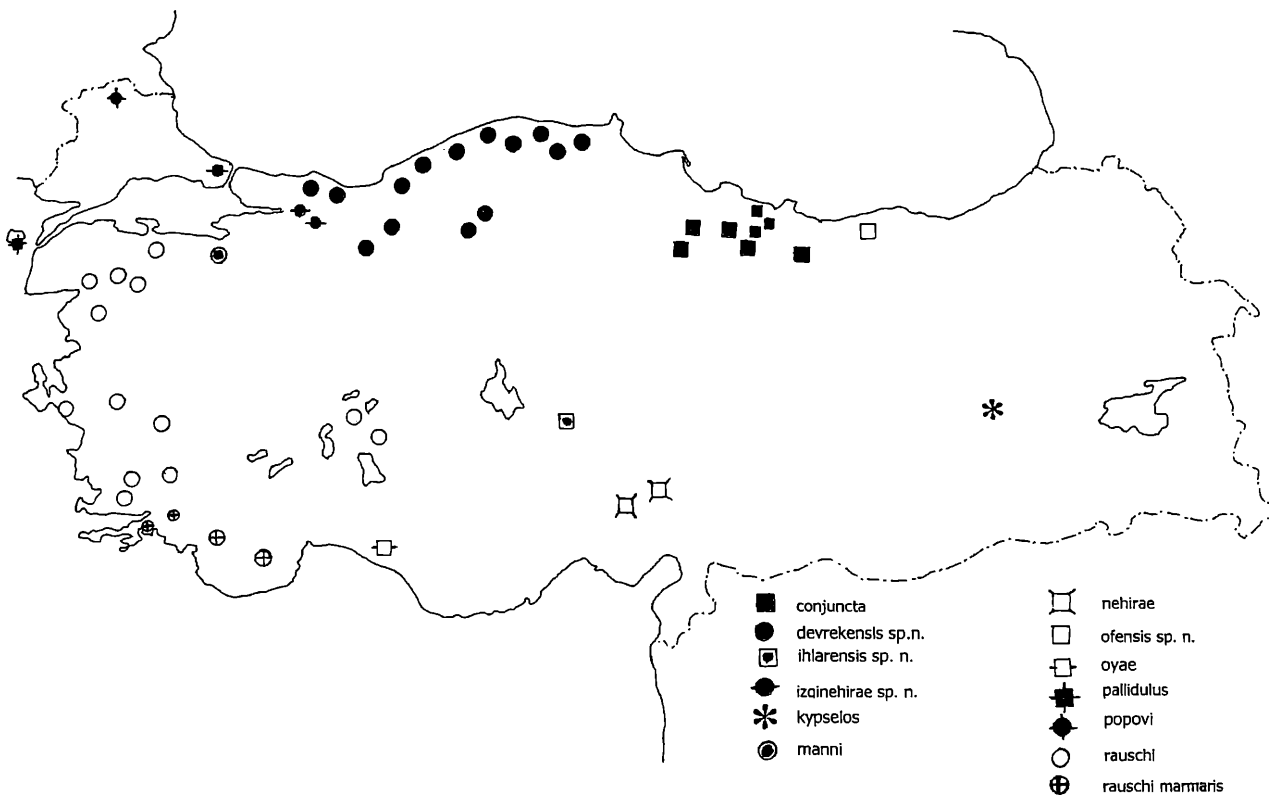
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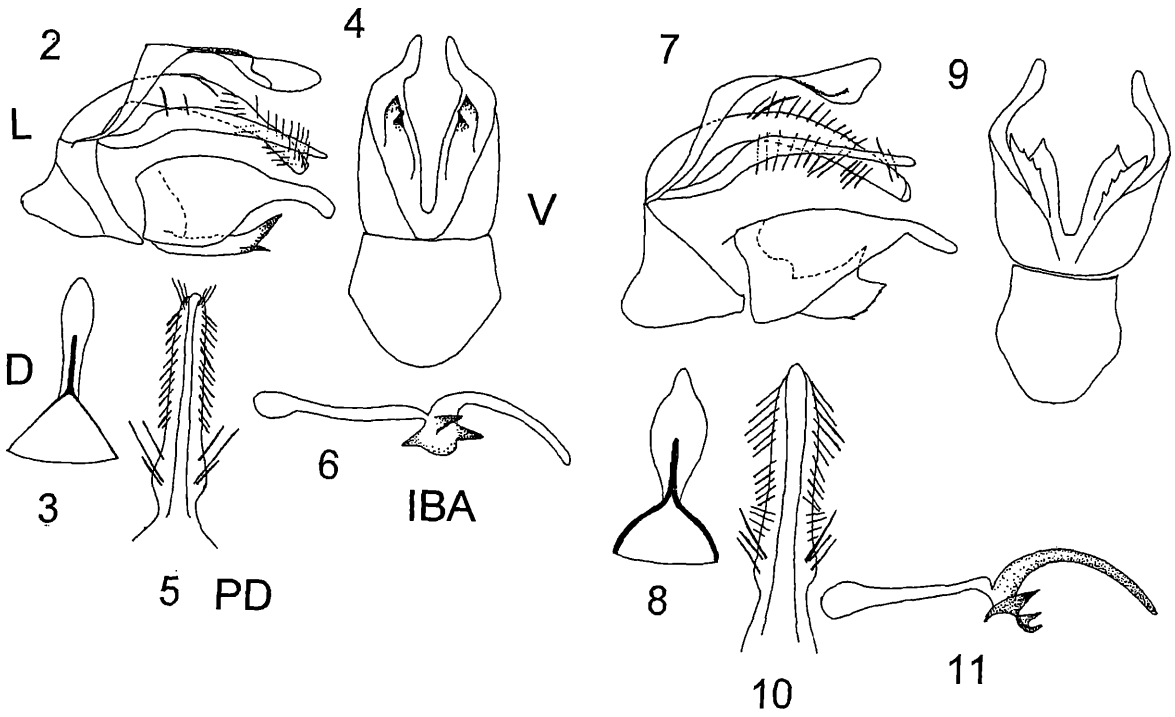
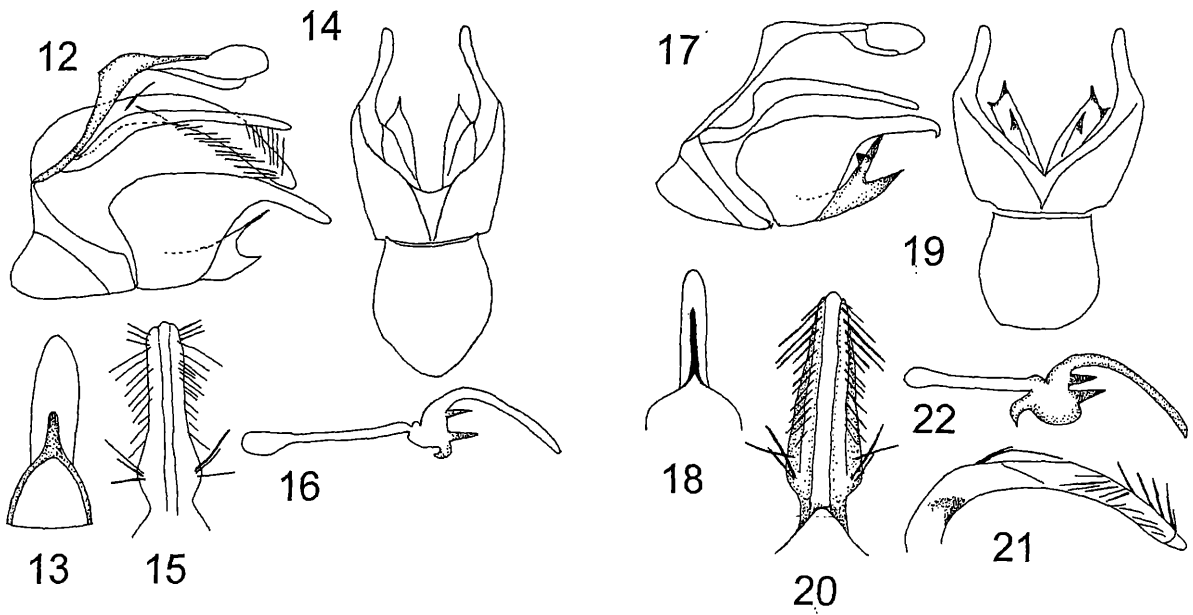
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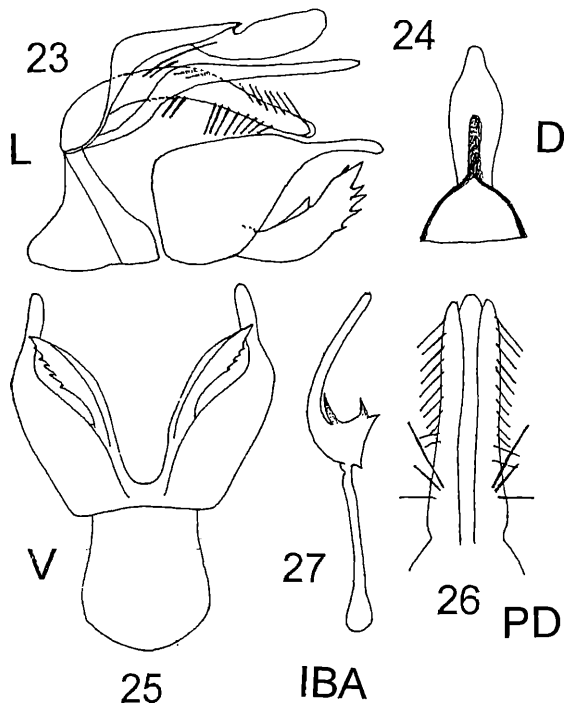
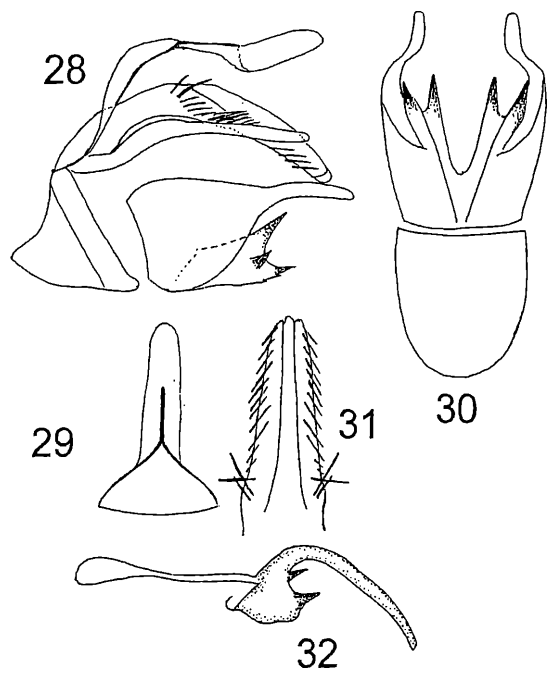
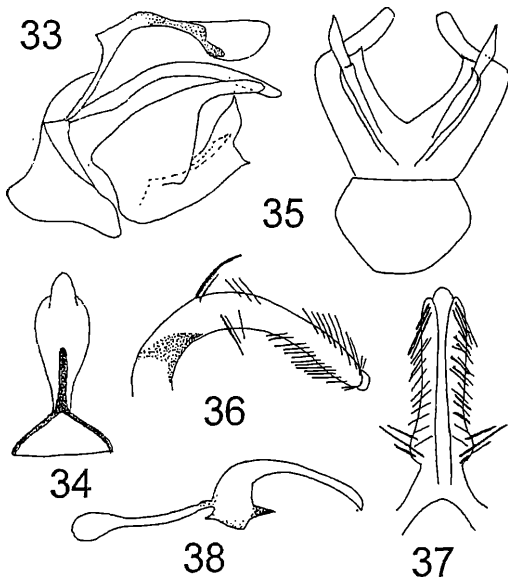
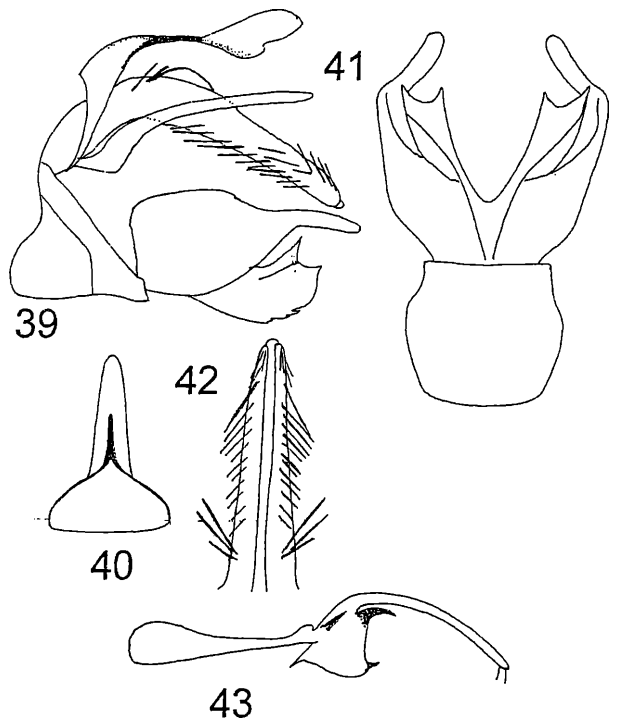
Table 1: *Tinodes pallidulus* species group and the distribution of the species (Data from Greece: Malicky, 2005).

<i>Tinodes pallidulus</i> species group	Distribution
<i>Tinodes anemoessa</i> MALICKY 1984	Greece (Skiros)
<i>Tinodes aspoeckae</i> MALICKY 1975	Greece (Andros, Tinos)
<i>Tinodes conjuncta</i> MARTYNOV 1913	Caucasus, Turkey (Giresun, Trabzon)
<i>Tinodes curvata</i> MARTYNOV 1934	Caucasus
<i>Tinodes devrekensis</i> sp. n.	Turkey (Zonguldak, Karabük)
<i>Tinodes ihlaraensis</i> sp. n.	Turkey (Aksaray, Ihlara)
<i>Tinodes izginehirae</i> sp. n.	Turkey (İstanbul, Sarıyer)
<i>Tinodes izginehirae sapancaensis</i> ssp. n.	Turkey, (Sakarya, Sapanca)
<i>Tinodes janssensi</i> JACQUEMART 1957	Greece (northern Greece, Thasos, Skiathos)
<i>Tinodes kypselos</i> MALICKY 1977	Turkey (Muş)
<i>Tinodes manni</i> MCLACHLAN 1978	Turkey (Bursa)
<i>Tinodes megalopompos</i> MALICKY 1977	Greece (Naxos)
<i>Tinodes nehiraie</i> SIPAHILER 1992	Turkey (Kayseri, Adana), Syria
<i>Tinodes ofensis</i> sp. n.	Turkey (Trabzon, Of)
<i>Tinodes oyaie</i> SIPAHILER 1994	Turkey (Antalya, Manavgat)
<i>Tinodes pallidulus</i> MCLACHLAN 1878	Europe, Turkey (Gökçeada)
<i>Tinodes peterressli</i> MALICKY 1975	Greece (Ikaria)
<i>Tinodes polyhymnia</i> MALICKY 1976	Greece (middle Euböa)
<i>Tinodes popovi</i> KUMANSKI 1975	Bulgaria and Turkey (Strandsha Mountains)
<i>Tinodes portolafia</i> MALICKY 1976	Greece (Ochi Mountains)
<i>Tinodes rauschi</i> MALICKY 1975	Greece (Lesbos, Chios, Samos) Turkey (western and southern Turkey)
<i>T. r. marmaris</i> MALICKY & SIPAHILER 1993	Turkey (Southwestern Turkey, Marmaris)
<i>Tinodes serifos</i> MALICKY 1984	Greece (Serifos)

Fig. 1: Distribution of the *Tinodes pallidulus* group in Turkey

*devrekensis**izginehirae**ihlaraensis**ofensis*

Figs. 2–22. *Tinodes* species, male genitalia: L, lateral view; D, dorsal view; V, ventral view; PD, phallic apparatus, dorsal view; IBA, inner basal appendage, lateral view.

*pallidulus**popovi**conjuncta**rauschi*

Figs. 23–43. *Tinodes* species, male genitalia: L, lateral view; D, dorsal view; V, ventral view; PD, phallic apparatus, dorsal view; IBA, inner basal appendage, lateral view.



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