Two new *Drapetis* species (Diptera: Hybotidae) from Sweden

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Drapetis undulata **sp. nov.** and *D. terjei* **sp. nov.** (Diptera: Hybotidae) are described on material from the Baltic islands Öland and Gotland (Sweden), respectively. Both species are related to *D. hirsuticercis* Stark, 2003 with which they form a species group characterised by the long setae on the tips of both left and right cercus and the cerci being fused for a short distance near their tip. *Drapetis terjei* **sp. nov.** has the tip of the left cercus as long as the tip of right cercus and the hind femur about as wide as the fore femur. In *Drapetis undulata* **sp. nov.** the left cercus is much shorter than the right cercus and the hind femur is much thicker than the fore femur. Females of both species are unknown.

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The genus *Drapetis* consists of small, dark, predacious flies with a body length of 1.2 to 2 mm. Adults are generally found on tree trunks (Michelsen & Grootaert 2019) but can also be swept from foliage and flowers. The immature stages are poorly known but at least some species apparently develop in decaying wood as they have been reared, sometimes in large numbers, from stumps and woody debris (Jonsell et al. 2019). The taxonomy of the group remains quite obscure since no thorough revisions of the genus took place since Collin (1961), Kovalev (1972) and Chvála (1975). Only some punctual new data have become available for western Europe (Stark 2003, Grootaert *et al.* 2010, Grootaert 2016). Recently the *Drapetis* of Sweden were reviewed (Michelsen & Grootaert 2019) and a key was provided for males of species from North-western Europe. Special attention was given to modifications of the mid leg cuticle found exclusively in males of certain species within the *exilis* species group. The species-diagnostic, in part ultra-structural modifications of the cuticle were documented by SEM images. The discovery of brochosomes on the legs of three out of the six *Drapetis* species examined may suggest that small leafhoppers are regularly used as prey.

Michelsen & Grootaert (2019) also described a new species, *D. abrollensis*, from Skåne in southernmost Sweden. The authors were, however, not aware that the new species, though undescribed, was already known under the preliminary name *Drapetis* sp. *"jonasseni"*, named after the Norwegian entomologist Terje Jonassen who first recognized it in Norway. Actually, in Sweden it is a widely distributed species found almost all over the country with the northernmost record from Torne lappmark, far north of the polar circle (Högdahl *et al.* 2017, as *Drapetis* sp.). In a study of Brachycera developing in stumps on clear-felled areas in central Sweden it was the most numerous species, reared from both birch and spruce stumps (Jonsell et al. 2019). It is also known from northern Finland (Salmela et al. 2015).

Figure 1. *Drapetis terjei* **sp. nov.** Holotype male, from Alskog on the Baltic island Gotland.
Figur 1. *Drapetis terjei* **sp. nov.** Holotyp, hane, från Alskog, Gotland.

In the present paper we add two more new species for science to the fauna of Sweden. They were found on the islands of Öland and Gotland in the Baltic Sea.

Material and methods

The material reported below was caught in Malaise traps in surveys initiated by Niklas Johansson, primarily to study parasitic wasps but Brachycera in the traps were sorted out and sent to the second author. Samples were initially stored in 70% ethanol. *Drapetis* specimens were mounted on Minuten pins after separation of the genital capsule from the abdomen, immersed in pure acetone for 24 hours and thereafter dried. The genitals were macerated for about 24 hours in cold 10% KOH and thereafter stored in glycerine in small plastic vials attached to the pin of the specimen. The material will be deposited in Naturhistoriska Riksmuseet, Stockholm (NHRS).

Abbreviations:
dp = dorsal projection of the right epandrial lamella.
a = anus.
ej = ejaculatory apodeme.
lc = left cercus.
lel = left epandrial lamella.
ls1 = left surstylus 1.
ls2 = left surstylus 2.
rc = right cercus.
rel = right epandrial lamella.

Results

Hybotidae Meigen, 1820
Tachydromiinae Meigen, 1822
Drapetis **Meigen, 1822**
***Drapetis terjei* sp. nov. (Figs 1–2)**

Type material

Holotype male: **SWEDEN**: Gotland, Alskog par., 1.5 km W Västerby (57°22'9''N 18°38'17''E), 10–21 July 2017, moist meadow on calcareous ground, Malaise trap, leg. Dennis Nyström and Arne Pettersson. Deposited in Naturhistoriska Riksmuseet, Stockholm.

Diagnosis (male): A dark-legged species of the *exilis*-group with upper crossvein (r-m) distinctly beyond middle of second basal cell (bm). Antenna entirely black, with ventral bristles on pedicel as long as length of pedicel. Postpedicel a little longer than wide. Mid femur anteriorly shiny with sparse setulation and indistinct transverse rims. Wing with weakly undulating vein R_{4+5}, M_{1+2} almost straight. Hind femur as wide as mid femur, only weakly curved laterally as well as dorsoventrally, lacking a ventral swelling in apical third. Male cerci apically narrowly fused just beyond anus, both digitiform, of subequal length, tips of right and left cercus equally long, in dorsal view both with a rounded to truncate tip (Fig. 2C), densely set with strong simple setae.

Description (male; female unknown)

Body length: 1.4 mm; wing length 1.5 mm (n=1).

Head: Black in ground-colour, subshiny through fine grey pruinosity. Occiput with a narrow shiny stripe along the eyes. Frons subshiny, narrowing downwards to antennae; face subshiny, linear, widening immediately above clypeus. All setae on head black, but occiput entirely covered with yellowish (golden) setulae. Anterior ocellar bristles rather short, crossing; posterior ocellars diverging, as long as anterior ocellars. A pair of (inner) vertical setae slightly longer than ocellars, flanked by a slightly shorter postocular seta, followed by a row of short postoculars. Antenna brownish black, scape shiny black, but pedicel and postpedicel dull black. Ventral bristles on pedicel as long as length of pedicel; postpedicel a little longer than wide, sub-quadrangular, with apical stylus about 3 x longer than all antennal segments combined. Palpus ellipsoid, longer than postpedicel, black, covered with golden-yellow setulae but setae black. Labella brown.

Thorax: Mostly shiny black, except grey pruinose on prothorax; scutellum and upper half of mesopleura sparsely set with pale microtrichia. No upturned seta on proepisternum. Mesonotum densely and uniformly set with yellowish brown setulae. Acrostichals not distinct from surrounding setulae except for a pair of black erect setae near anterior margin; a pair of long black prescutellar dorsocentrals; 3 black notopleurals, 3 short black supra-alars and a pair of black scutellars, flanked by a short seta at each side. Metanotum and metapleura shiny black with a little pruinosity.

Wings: Hyaline, faintly brownish tinged; costa black but other veins pale brown (Fig. 1). Vein R_{4+5} undulating in apical third. M_{1+2} almost straight over entire length. Anal vein indistinctly indicated as a fold not reaching the wing border. Squama brownish black with long, dark marginal setae. Haltere blackish on knob and stalk.

Legs: Extensively brownish, but fore coxa yellow on apical half, all femora narrowly yellow at base and "knees"; all tibiae and tarsomeres yellowish brown. Leg chaetotaxy mainly consisting of short pale setulae; even few setae pale yellowish on fore coxa, except for some relatively strong, dark setae anteriorly on mid coxa.

Fore femur stout, a little thicker than mid femur and about as thick as hind femur; thickened on about basal ¾, no ventral bristles except for a single pale long ventral bristle near extreme base that is much longer than femur is wide. Fore tibia tubular with a short black preapical anterior and posterior seta.

Mid femur narrower than fore femur. Anteriorly shiny with sparse setulation and indistinct transverse rims; ventrally in basal half densely covered with anteroventral and ventral setulae. Mid tibia tubular, though slightly swollen toward tip; apical half with minute ventral spinules.

Hind femur thickened, only weakly curved laterally and dorsoventrally; lacking a ventral tooth-like projection; 3 long black anterior preapical setae as well as some short dorsal preapicals; some erect dorsal setae near base; no ventral setae, but in apical third some longer anteroventral setulae. Hind tibia

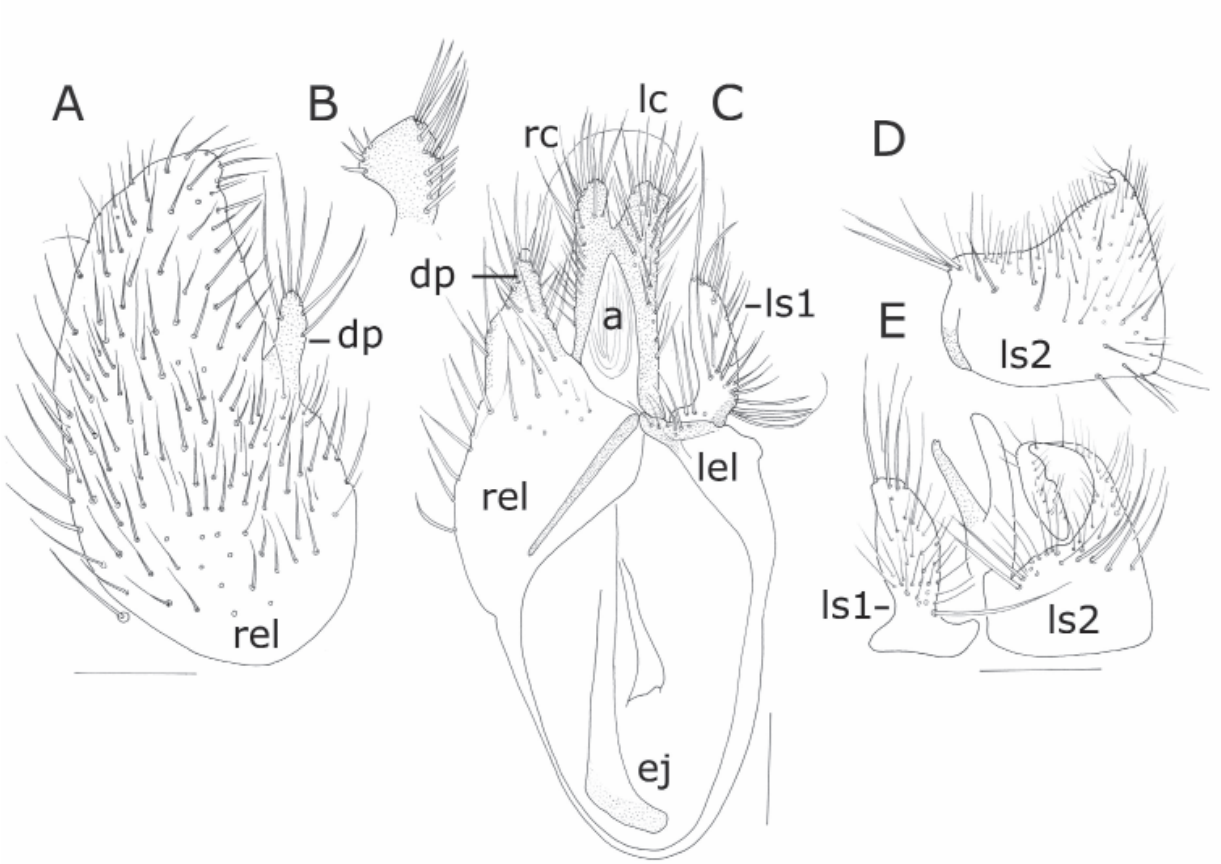

Figure 2. *Drapetis terjei* **sp. nov.** Holotype male, terminalia. – A) right epandrial lamella; – B) right cercus latera; – C) epandrium dorsal; – D) left surstylus ls2; – E) left surstyli (ls1 and ls2). Scale 0.1 mm.

Figur 2. *Drapetis terjei* **sp. nov.** Holotyp hane, genitalier. – A) höger epandrielamell; – B) höger cercus lateralt; – C) epandrium dorsalt; – D) vänster surstylus ls2; – E) vänster surstyli (ls1 och ls2). Skalstreck 0,1 mm.

widened toward apex, with short posteroventral orange apical tooth-like projection. Hind tarsomere 1 slightly swollen, distinctly longer than combined length of hind tarsomeres 2–3.

Abdomen: Tergite 1 whitish, not sclerotized; tergites 2–3 pale brownish. Tergite 4 long, dark brown. Tergite 5 very narrow. No distinct squamiform bristles on tergites 4 and 5. Only tergite 7 with long black marginal bristles. Sternite 1 very short; sternites 2–3 only sclerotized at basal margin, sternite 4 not sclerotized; sternites 5–7 brownish.

Male terminalia (Figs 2A–E): Right surstylus fused with right epandrial lamella; in lateral view the tip of the right epandrial lamella is broadly rounded (Figs 2B, C); right epandrial lamella with a triangular dorsal apical projection (Figs 2A, C dp). Cerci (Fig. 2C) narrowly fused just beyond anus. Right cercus nearly as long as left cercus, in dorsal view both with a rounded to truncate tip (Fig. 2C) set with strong simple bristles; right cercus somewhat produced inward apicoventrally (lateral view), with 4 short bristles on projected portion (Fig. 2B). Left epandrial lamella (lel) fused with hypandrium; five setae present on apical border of left epandrial lamella (Fig. 2C). Left surstylus 1 (Fig. 2C ls1) pale brown, digitiform, its apex with a few very long bristles, apical longest, as long as ls1 (Fig. 2E); base with several strong bristles. Left surstylus 2 (ls2) large (Fig. 2D).

Etymology: The species is dedicated to Terje Jonassen who has made significant contributions to the knowledge of the empidoid fauna in the Nordic countries.

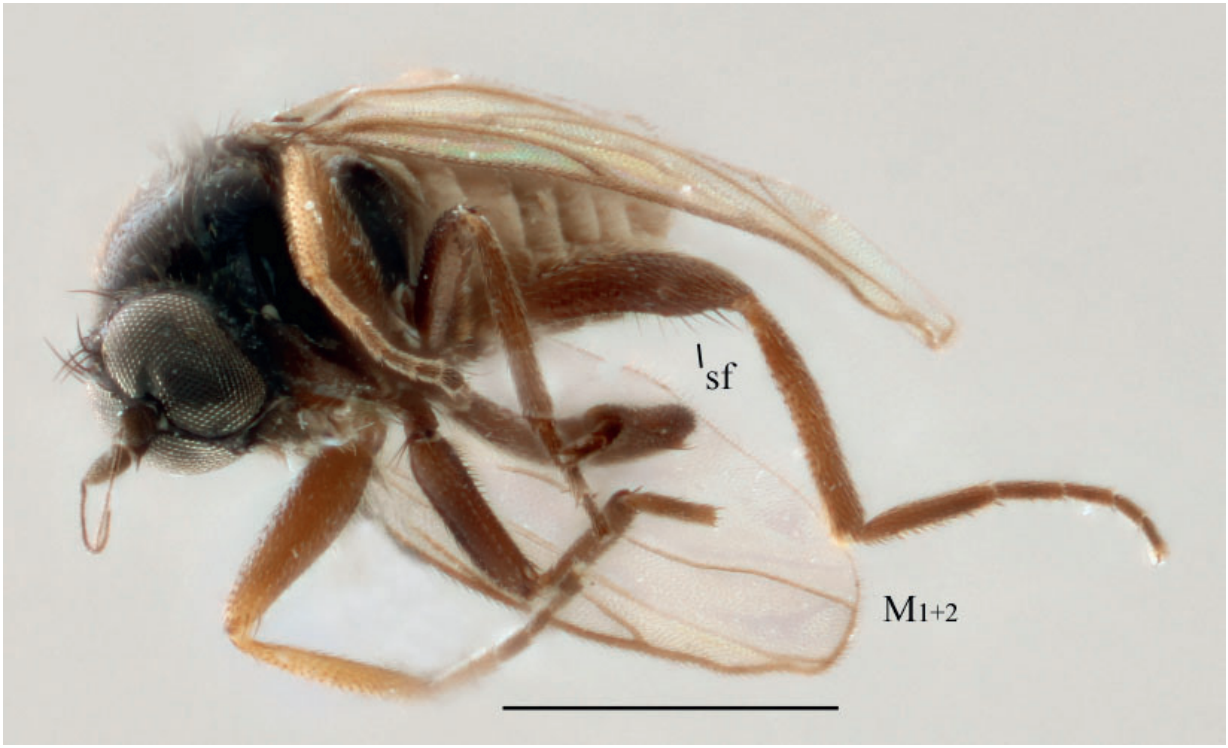

Figure 3. *Drapetis undulata* **sp. nov.** Holotype male, from Borgehage on the Baltic island Öland. M_{1+2} = undulating vein M1+2, sf = swelling on hind femur. Scale is 0.5 mm. Photo: Camille Locatelli.

Figur 3. *Drapetis undulata* **sp. nov.** Holotyp hane, från Borgehage, Öland. M1+2 = den böljande vingribban M_{1+2}, sf = tandliknande utbuktning på baklåret. Skalstreck 0,5 mm. Foto: Camille Locatelli.

Differential diagnosis

Drapetis terjei **sp. nov.** is closely related to *D. hirsuticercis* Stark, 2003 described from central Germany, the Alpes maritimes in France and Switzerland. Each of these three populations has slightly different male terminalia. The apex of the right epandrial lamella (Forsatz der rechten lamella *sensu* Stark (2003), Figs 71, 73, 75) is rather narrow and has a different shape. The apex of the epandrial lamella in *D. terjei* **sp. nov.** is wider and more rounded than in the three populations of *D. hirsuticercis*. The dorsal projection of the right epandrial lamella in *D. terjei* **sp. nov.** has a more slender apex, bearing long fine setae (Figs 2A, B dp) while the dorsal projection in *D. hirsuticercis* is broad triangular bearing thick setae at the apex. The length and bristling of the left surstylus (ls1) is also different. The left surstylus (ls1) is much broader in the new species than in *D. hirsuticercis* (Stark 2003, Figs 72, 74, 76) and the apex bears a very long bristle as long as the ls1 while the bristling is much shorter in the populations of *D. hirsuticercis*.

Drapetis undulata sp. nov. (Figs 3–4)

Type material

Holotype male: **SWEDEN**: Öland, Räpplinge par., Borgehage (56°51'4''N, 16°38'16''E), 16 August–20 September 2017, alvar heath with Juniperus, Malaise trap, leg. Niklas Johansson. Deposited in Naturhistoriska Riksmuseet, Stockholm.

Diagnosis (male): A dark-legged species of the *exilis*-group (Fig. 3) with upper crossvein (r-m) distinctly beyond middle of second basal cell (bm). Antenna entirely black; with ventral bristles on pedicel shorter than length of pedicel. Postpedicel about as long as wide, sub-quadrangular. Wing with strongly undulating veins R_{4+5} and M_{1+2}. Mid femur anteriorly shiny with sparse setulation and indistinct transverse rims. Hind femur swollen,

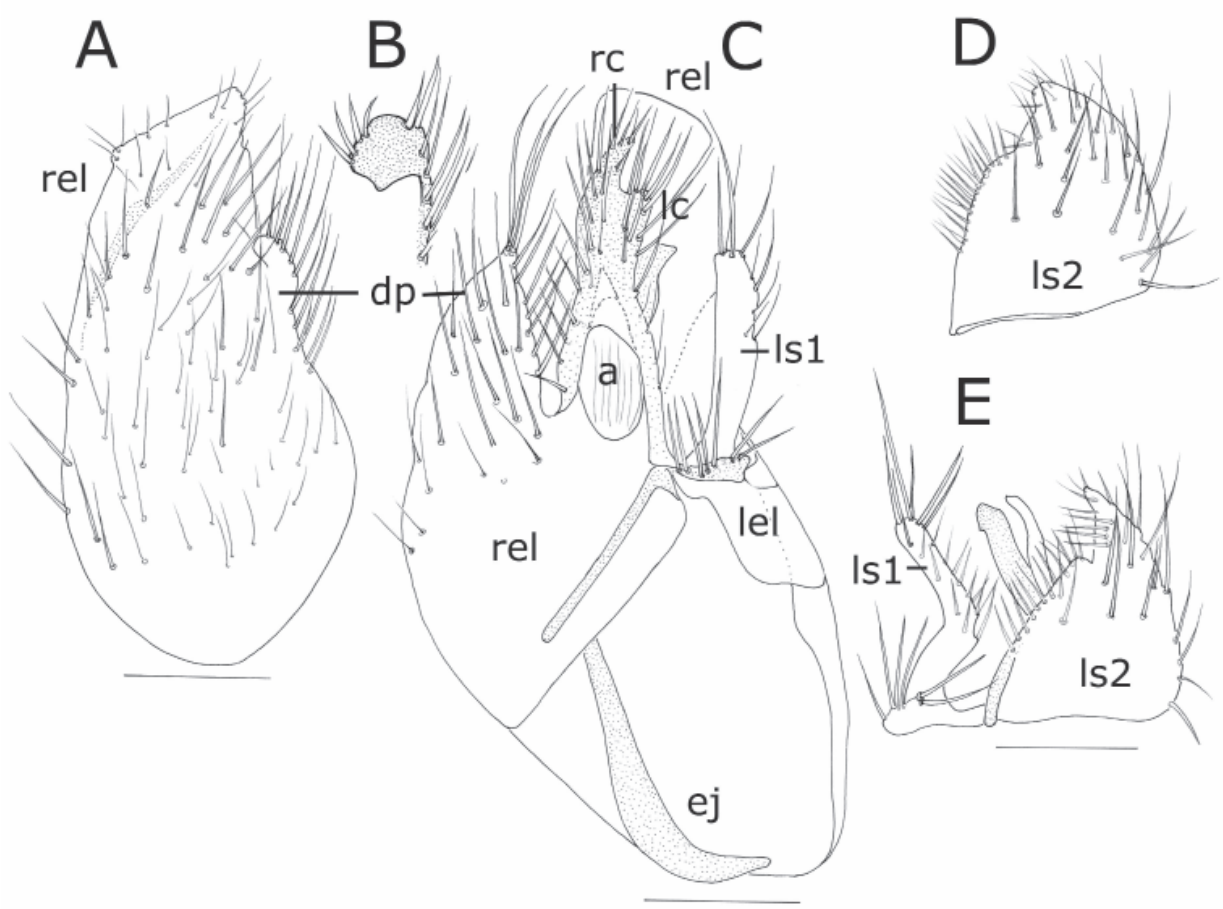

Figure 4. *Drapetis undulata* **sp. nov.** Holotype male, terminalia. – A) right epandrial lamella; – B) right cercus lateral; –C) epandrium dorsal; – D) left surstylus ls2; – E) left surstyli (ls1 and ls2). Scale 0.1 mm.

Figur 4. *Drapetis undulata* **sp. nov.** Holotyp hane, genitalier. – A) höger epandrielamell; – B) höger cercus lateralt; – C) epandrium dorsalt; – D) vänster surstylus ls2; – E) vänster surstyli (ls1 och ls2). Skalstreck 0,1 mm.

much thicker than mid femur and distinctly curved outwards as well as dorsoventrally with a ventral swelling in apical third. Male cerci broadly fused. Apex of right cercus pointed, much longer than apex of left cercus, both tips densely set with strong bristles.

Description (male; female unknown)

Body length: 1.2 mm; wing length 1.0 mm (n=1).

Head: Black in ground-colour, subshiny through fine grey pruinosity. Edge of eyes with occiput with a narrow shiny stripe. Frons subshiny, narrowing downwards to scape; face subshiny, linear, widening immediately above clypeus. All setae on head black, but occiput covered with minute pale setulae. Anterior ocellar bristles rather short, crossing; posterior ocellars diverging, as long as anterior ocellars. A pair of (inner) vertical setae slightly longer than ocellars, flanked by a slightly shorter postocular seta. Antenna brownish black, scape shiny black, but pedicel and postpedicel dull. Ventral bristles on pedicel shorter than length of pedicel; postpedicel about as long as wide, subquadrangular, with apical stylus about 2.2 times as long as all antennal segments combined. Palpus ellipsoid, nearly as long as postpedicel, black, covered with golden-yellow setulae, but setae black. Labella brown.

Thorax: Shiny black, except grey pruinose on prothorax; scutellum and upper half of mesopleura with some pruinosity. No upturned seta on proepisternum. Mesonotum densely and uniformly

set with pale microtrichia; acrostichals not distinct from surrounding setulae apart of a pair erect setae near anterior margin; a pair of black prescutellar dorsocentrals, nearly on posterior margin of mesonotum; 2 black notopleurals, 3 short black supra-alars and a pair of black cruciate scutellars, flanked by a short seta at each side. Metanotum and metapleura shiny black with a little pruinosity.

Wings: Hyaline, faintly brownish tinged, with pale brown veins (Fig. 3). Vein R_{4+5} strongly undulating in apical half, there converging with costa and eventually turning down before ending in costa. M_{1+2} undulating in basal half, while almost straight in apical third. Anal vein distinctly indicated in apical 2/3 as a pale vein almost reaching the wing border. Squama brownish black with long, dark marginal setae. Haltere blackish on knob and stalk.

Legs: Brownish, but fore tibiae and tarsomere 1 yellowish brown from some points of view.

Fore femur stout, decidedly thicker than mid femur, thickened on basal ¾, no ventral bristles except for a single long ventral bristle at base. Fore tibia thickened with short preapical setae (a posterior and posteroventral preapical).

Mid femur narrower than fore femur. Anteriorly shiny with sparse setulation and indistinct transverse rims. In basal half, ventrally with a row of short black setulae. Mid tibia tubular though a little swollen toward tip. Apical half with minute ventral spinules.

Hind femur thickened, distinctly curved outwards as well as dorsoventrally; ventrally in apically third with a swelling that looks like tooth-like projection from some point of view; 3 long black anterior preapical bristles (Fig. 3). Hind tibia narrow at base, wider toward tip, with a short posteroventral orange apical tooth. Hind tarsomere 1 slightly swollen, equal to combined length of hind tarsomeres 2–3.

Abdomen: Tergite 1 whitish, not sclerotized, tergites 2–3 pale brownish. Tergite 4 long, dark brown with indistinct squamiform bristles at side. Tergite 5 very short, bearing a few black squamiform bristles. Only tergite 7 with long black marginal bristles. Sternite 1 very short; sternites 2–3 only sclerotized at basal margin, sternite 4 not sclerotized; sternites 5–7 brownish.

Male terminalia (Figs 4A–E): Right surstylus fused with right epandrial lamella; right epandrial lamella with a conical dorsal apical projection (Fig. 4C dp). Cerci (Fig. 4C) distally fused over more than apical half. Right cercus longer than left cercus. Tip of right cercus pointed (Fig. 4C) set with short bristles; tip ventrally protruding as seen in lateral view (Fig. 4B), set with 4 short strong bristles. Left cercus with a blunt tip, densely set with long bristles. Anus short (Fig. 4C). Left epandrial lamella (lel) fused with hypandrium; five setae present on apical dorsal border of left epandrial lamella (Fig. 4C). Left surstylus 1 (ls1) pale brown, tip with a few long bristles as well as a few long bristles on left margin in apical half; left surstylus 2 (ls2) large (Fig. 4D).

Etymology: The specific epithet (*undulata*) refers to the strongly undulating veins R_{4+5} and M_{1+2}.

Differential diagnosis

Drapetis undulata **sp. nov.** is closely related to *D. terjei* **sp. nov.** but differing by the strongly undulating veins R_{4+5} and M_{1+2}. It differs from both *D. terjei* and *D. hirsuticercis* by the pointed right cercus while the apex of the left cercus is much shorter. Both cerci are fused above the anus for a longer distance than in *D. terjei* **sp. nov.** and *D. hirsuticercis*.

General comments and discussion

Both new species belong to the *exilis*-group in having the upper cross vein closer to the basal cross vein than in the *assimilis* group where the upper cross vein in situated before or nearly halfway the median basal cell. Both new species are peculiar and immediately recognisable by the strong cerci being fused only near their tips. In addition, the tips of both cerci are densely set with rather strong setae. It is clear that as discussed above, *D. terjei* **sp. nov.** and *D. undulata* **sp. nov.** form a distinct species group with the central European *D. hirsuticercis* Stark, 2003. *Drapetis undulata* **sp. nov.** with the thickened and strongly curved hind femur is distinct from *D. terjei* and *hirsuticercis* that both have rather slender hind femora as wide as the front femora. *Drapetis terjei* differs from the latter in many details of the male terminalia, as discussed above and in having the mid tibia with a ventral row of blunt spinules in the apical half. In *D. hirsuticercis* there is an apical patch of spinules only.

In the present paper we do not produce yet another key for the *Drapetis* since many

more species are expected to be described in the upcoming years (A. Stark, personal communication). To facilitate identification of the Scandinavian *Drapetis* we refer to the key of Michelsen & Grootaert (2019). Although it is very difficult to see (high magnification needed, preferably >50X), both species have fine though indistinct transverse furrows anteriorly on the mid femur and so both new species will run to couplet 9, to *D. exilis* Meigen that also has undulating veins R_{4+5} and M_{1+2}. However, the cerci of *D. exilis* are much thinner with only fine setae and the tip of the right epandrial lamella is spatulate (Collin 1961, Fig. 14a) while the cerci are stronger, and their tips bear stronger setae in both new species.

If the fine, transverse furrows anteriorly on the mid femur are overlooked, both new species will run to couplet 14. If the male terminalia bear two strong, black spine-like setae on the left surstylus 1 and two similar strong setae on the right surstylus the species is likely *D. stackelbergi* Kovalev (Kovalev 1972, Figs 15, 16, 24). If the male terminalia do not bear such strong setae the species is likely *D. completa* Kovalev 1972. (Kovalev 1972, Figs 17–19, 24). Both species also occur in Sweden. But the new species are very distinct by having much stronger cerci and their apices densely set with rather strong setae.

Including the two new species, 13 species of *Drapetis* are now known from Sweden. Only six species were known from the country after the publication of the Tachydromiinae-volume of Fauna entomologica scandinavica by Chvála (1975), and the number of species has thus more than doubled since then. The knowledge of the hybotid fauna in Sweden is however uneven, with few records from large parts of the country. It is generally poor for the Baltic islands and especially so for the genus *Drapetis. Drapetis parilis* Collin, 1926, a common and widely distributed species in Sweden, was recently reported from an oak-dominated forest (Vanserum) in Öland (ArtPortalen 2019) and was also found in the trap that caught *D. undulata* **sp. nov.** *Drapetis parilis* was also present in the material from the trap on Gotland that yielded *D. terjei* **sp. nov.**, but there are no other records of *Drapetis* from neither Öland nor Gotland. For the time being we do not know if *Drapetis* spp. are really rare on the islands or just over-looked. Larger surveys of the Brachycera fauna on Öland in the past (e.g. Andersson & Danielsson 1980, Persson 1983) has often neglected Hybotidae as well as Empididae.

Drapetis undulata **sp. nov.** was found in an alvar habitat. Alvar is a steppe like formation on limestone bedrock with no or only a thin layer of soil. It is often flooded during the winter and spring but affected by drought during the summer. Trees and bushes are absent or stunted due to grazing by cattle. This habitat supports a peculiar flora and

Figure 5. Habitat of *Drapetis undulata* **sp. nov.** at Borgehage, thickets of *Juniperus communis* and *Prunus spinosa* at the outskirts of the Great alvar on the island Öland. Photo: Niklas Johansson.

Figur 5. Miljö för *Drapetis undulata* **sp. nov.** vid Borgehage, busksnår med en och slån i utkanten av Stora alvaret på Öland. Foto: Niklas Johansson.

fauna that have received much attention over the years. In Sweden, alvar habitats are found especially on Öland and Gotland, with the Great Alvar on Southern Öland being the largest continuous alvar. Some insect species found on alvar have isolated occurrences there, with the nearest localities far to the east, south or to the north, and are considered to be of relict nature (Coulianos & Sylvén 1983). Among empidoid flies *Scellus dolichocerus* Gerstäcker, 1864 (Dolichopodidae) is a species that is only known from alvar habitats on Öland and Gotland (Persson 1983). Typically, the alvar shows a mosaic of different environmental types but the most distinctive alvar species are generally found in habitats with poor, low-growing vegetation (Coulianos & Sylvén 1983).

The trap that caught *D. undulata* **sp. nov.** was placed in the outskirts of the alvar among rather dense thickets of *Juniperus communis* and *Prunus spinosa* due to no grazing for several years (Fig. 5), but only about 100 m from the open steppe like heath. With only a single specimen found we cannot say much about the habitat preferences of *D. undulata*, but as discussed below it is possible that it inhabits the open habitat and temporarily seeks shelter in bushy areas. The following other species of Hybotidae were caught in the same trap: *Drapetis parilis*, *Elaphropeza ephippiata* (Fallén, 1815), *Platypalpus albicornis (*Zetterstedt, 1842), *P. annulipes* (Meigen, 1822), *P. candicans* (Fallén, 1815), *P. longiseta* (Zetterstedt, 1842), *P. minutus* (Meigen, 1804), *P. pallidiventris* (Meigen, 1822) and *Tachypeza nubila* (Meigen, 1804). Other interesting species of flies in the trap were *Siphunculina nidicola* Nartshuk, 1971 (Chloropidae) and *Catharosia albisquama* (Villeneuve, 1932) (Tachinidae), none of them previously recorded from Sweden.

The trap that caught *D. terjei* **sp. nov.** was placed in a rather moist, ungrazed meadow (under a power line) on calcareous ground, close to arable fields and a wood (Fig. 6). The following other species of Hybotidae were caught in the same trap: *Drapetis parilis*, *Elaphropeza ephippiata*, *Platypalpus annulipes*, *P. candicans* and *P. infectus* (Collin, 1926).

D. hirsuticercis shows according to Stark (2003) an affinity for sites with a high pH in the ground. Interestingly, the hitherto only known records of *D. terjei* and *D. undulata* are also from high pH areas. Maybe all these three species, that we presume are closely related, are confined to high pH areas? *D. hirsuticercis* was found especially at sites with a warm microclimate and as it was caught in large numbers in pitfall traps, Stark (2003) thought that the flies lived on or near the ground. Several other species of *Drapetis* are especially found on tree trunks. If the new species are similar to *D. hirsuticercis* in these respects, we suggest that they should be searched for in

Figure 6. Habitat of *Drapetis terjei* **sp. nov.** at Alskog on the island Gotland, a moist meadow with arable fields and forests in the surroundings. Photo: Dennis Nyström.

Figur 6. Miljö för *Drapetis terjei* **sp. nov.** vid Alskog på Gotland, en fuktig ängsmark med åkermark och skog i omgivningarna. Foto: Dennis Nyström.

rather open habitats. Pan traps on the ground, that according to our experience are efficient in catching *Drapetis* spp., or pitfall traps can be useful tools to find them.

Acknowledgements

We thank Mr Niklas Johansson who provided the insect material that resulted in the discovery of the two new species. Ms Camille Locatelli (RBINS) made the stacked images of the holotypes. Dr Igor Shamshev and Mr Terje Johanssen made very useful comments to the manuscript. Last but not least we heartily thank Dr Andreas Stark for his information on the occurrence of *Drapetis* in Europe.

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Sammanfattning

Drapetis undulata **sp. nov.** och *Drapetis terjei* **sp. nov.** (Diptera: Hybotidae) beskrivs baserat på material från Öland respektive Gotland. Båda arterna är nära besläktade med *D. hirsuticercis* Stark, 2003 och bildar med denna art en artgrupp som karaktäriseras av långa borst i spetsarna på cerci. Hos *D. terjei* **sp. nov.** är höger och vänster cercus lika långa och baklår ungefär lika tjocka som framlår. Hos *Drapetis undulata* **sp. nov.** är vänster cercus tydligt kortare än höger cercus och baklår är tjockare än framlår. Honor för båda arterna är än så länge okända. Flugorna är drygt 1 mm stora och torde leva som rovdjur.