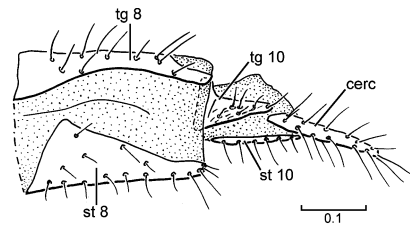
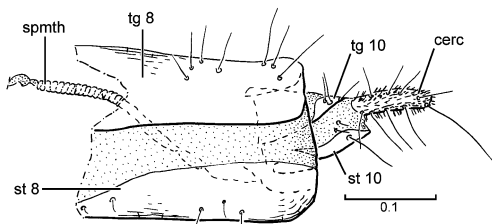


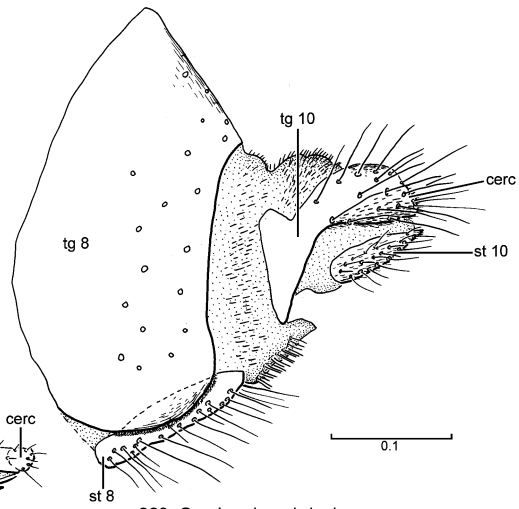
219. *Trichinomyia flavipes*



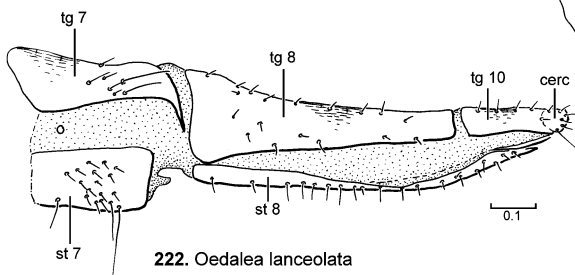
220. *Neotrichina* sp.



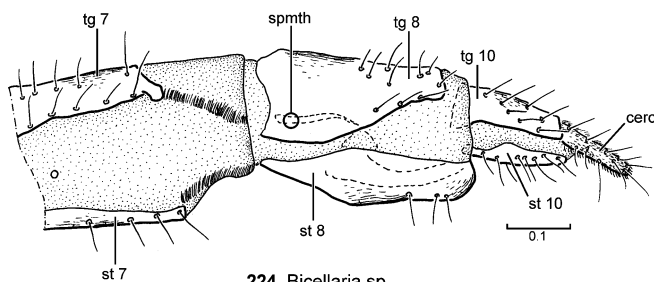
221. *Trichina clavipes*



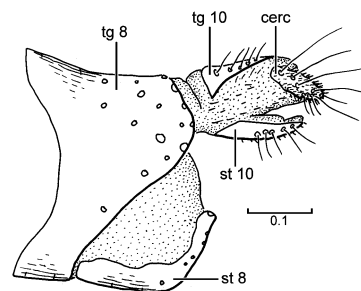
223. *Ocydromia gabricula*



222. *Oedalea lanceolata*

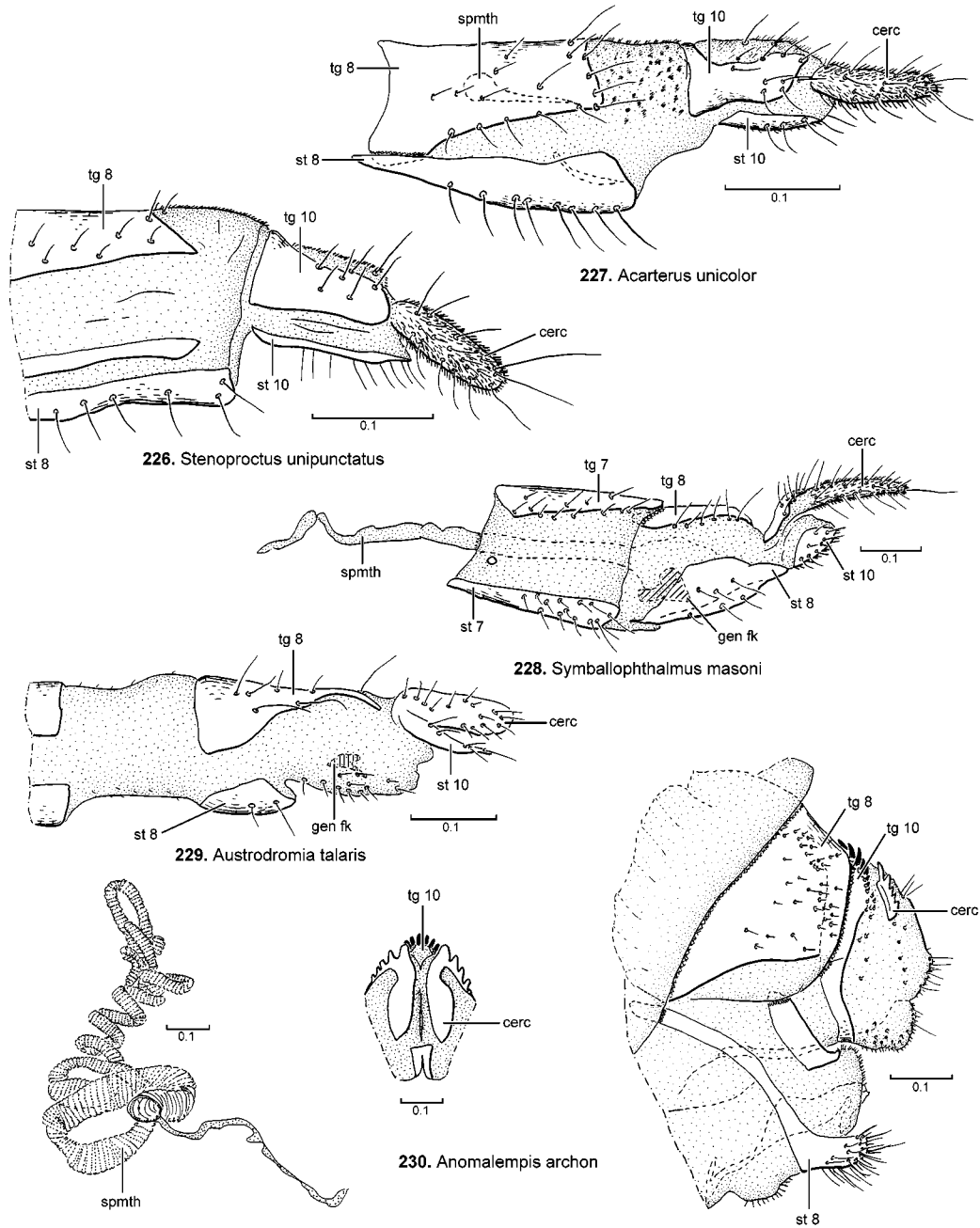


224. *Bicellaria* sp.

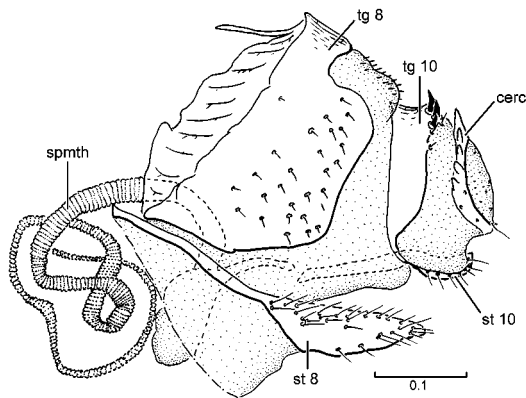


225. *Hybos reversus*

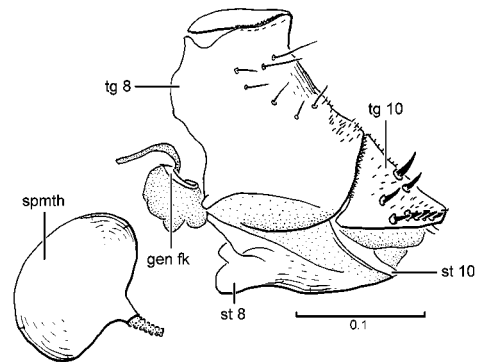
**FIGURES 219–225.** Female terminalia of Empidoidea, lateral view. **219.** *Trichinomyia flavipes* (Zetterstedt). **220.** *Neotrichina* sp. **221.** *Trichina clavipes* (Meigen). **222.** *Oedalea lanceolata* Melander. **223.** *Ocydromia gabricula* (Fallén). **224.** *Bicellaria* sp. **225.** *Hybos reversus* Walker. Abbreviations: cerc—cercus, spmth—spermatheca, st—sternite 7, 8 and 10, tg—tergite 7, 8 and 10. Scale in mm.



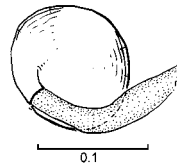
**FIGURES 226–230.** Female terminalia and spermathecae of Empidoidea. **226.** *Stenoproctus unipunctatus* Loew, lateral view. **227.** *Acarterus unicolor* Loew, lateral view. **228.** *Symballophthalmus masoni* Chillcott, lateral view. **229.** *Austrodromia talaris* Collin, lateral view. **230.** *Anomalempis archon* Melander, spermatheca on left side, terminalia (posterior view) in middle, terminalia (lateral view) on right side. Abbreviations: cerc—cercus, gen fk—genital fork, spmth—spermatheca, st—sternite 8 and 10, tg—tergite 8 and 10. Scale in mm.



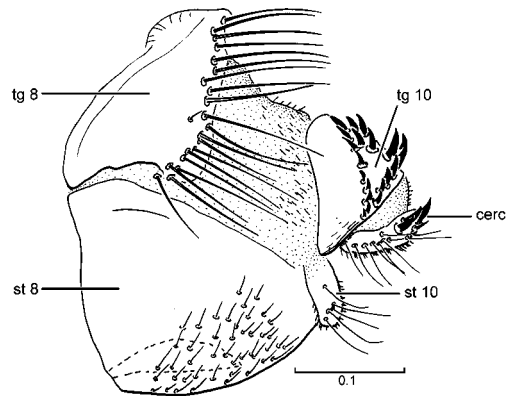
231. *Brachystoma nigrimanus*



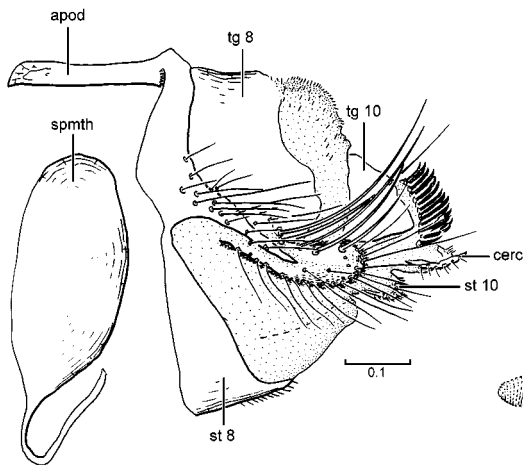
232. *Glyphidopeza fluviatilis*



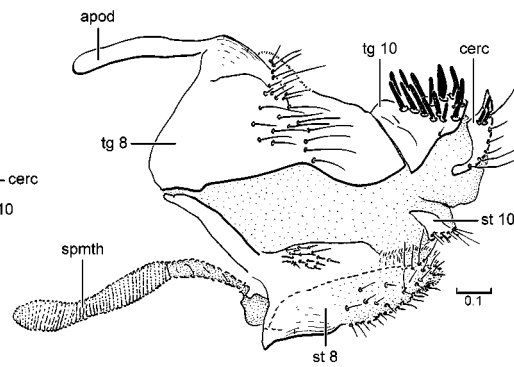
233. *Ceratomerus paradoxus*



234. *Ceratomerus paradoxus*

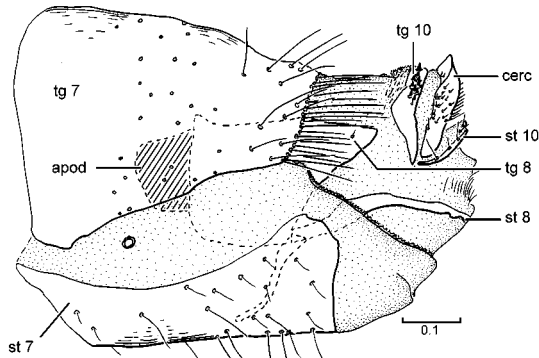


235. *Sabroskyella rancheria*

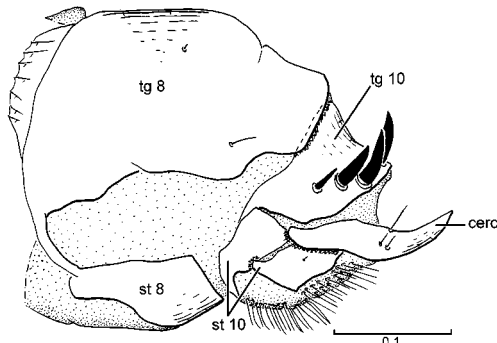


236. *Heterophlebus versabilis*

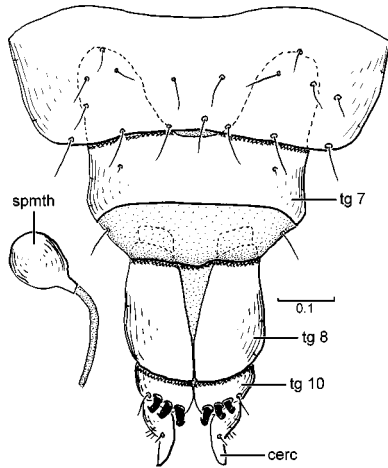
**FIGURES 231–236.** Female terminalia and spermathecae of Empidoidea. **231.** *Brachystoma nigrimanus* Loew, lateral view. **232.** *Glyphidopeza fluviatilis* Sinclair, lateral view, spermatheca on left side. **233.** *Ceratomerus paradoxus* Philippi, spermatheca and duct. **234.** *Ceratomerus paradoxus* Philippi, lateral view. **235.** *Sabroskyella rancheria* Wilder, lateral view, spermatheca on left side. **236.** *Heterophlebus versabilis* (Collin), lateral view. Abbreviations: apod—apodeme, cerc—cercus, gen fk—genital fork, spmth—spermatheca, st—sternite 8 and 10, tg—tergite 8 and 10. Scale in mm.



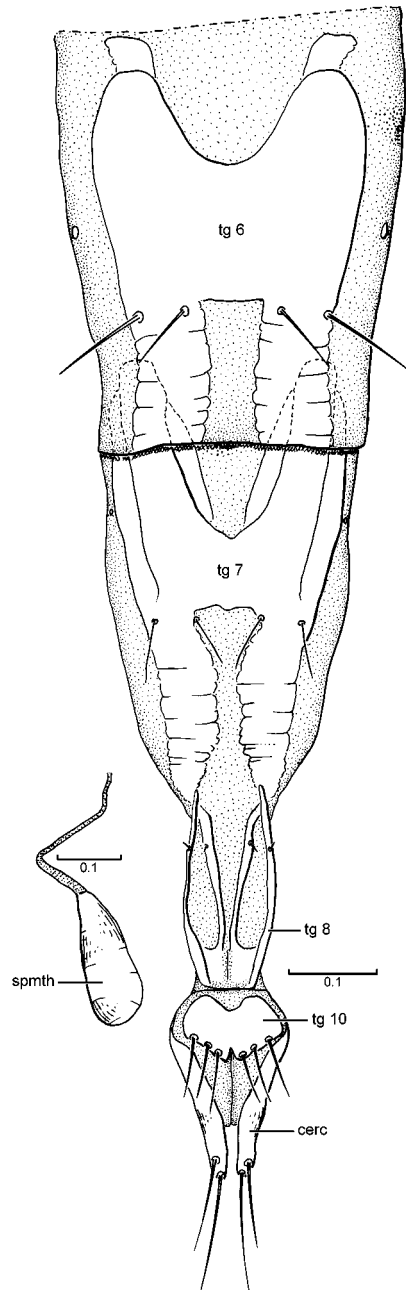
237. *Niphogenia eucera*



238. *Schistostoma armipes*

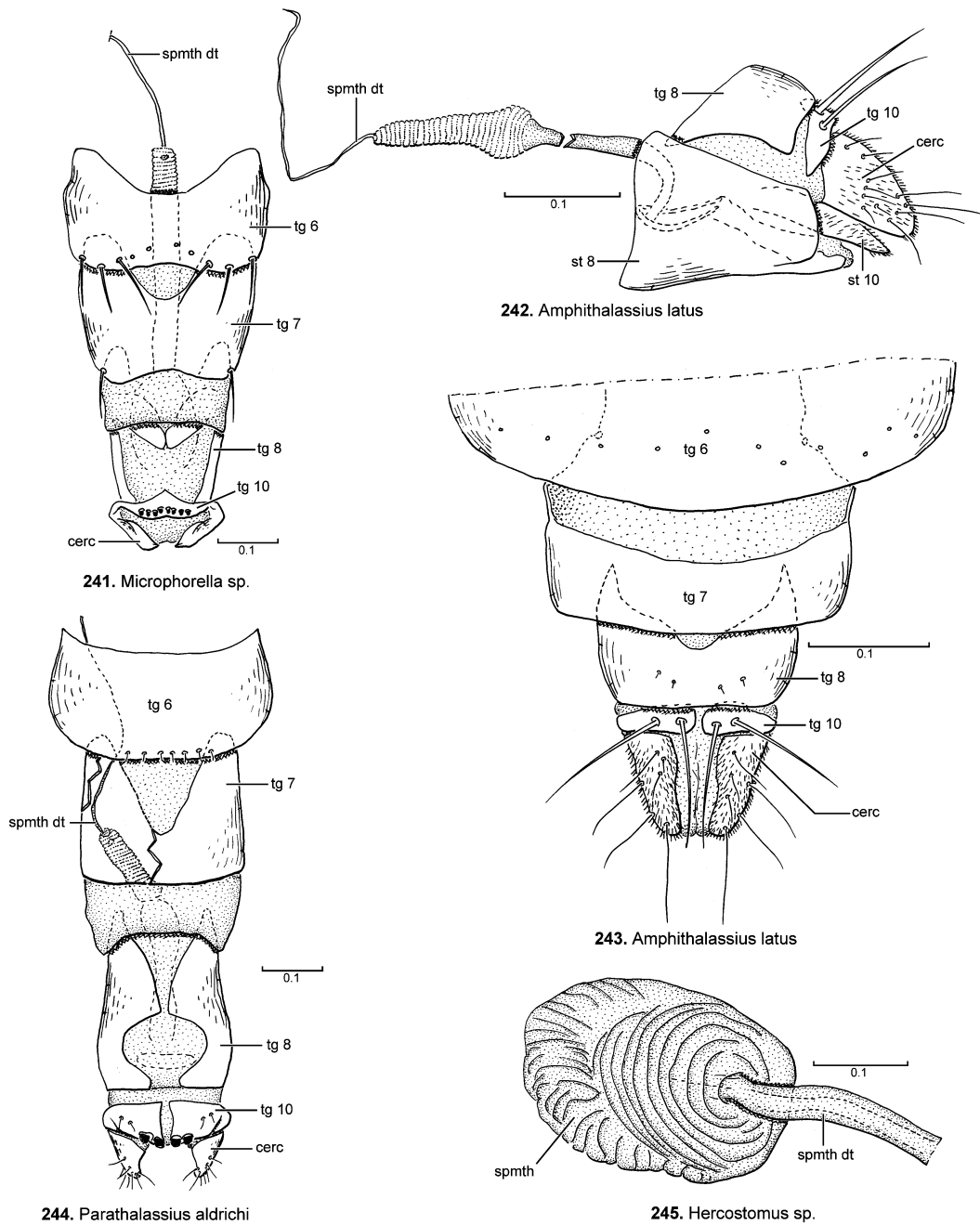


239. *Schistostoma armipes*

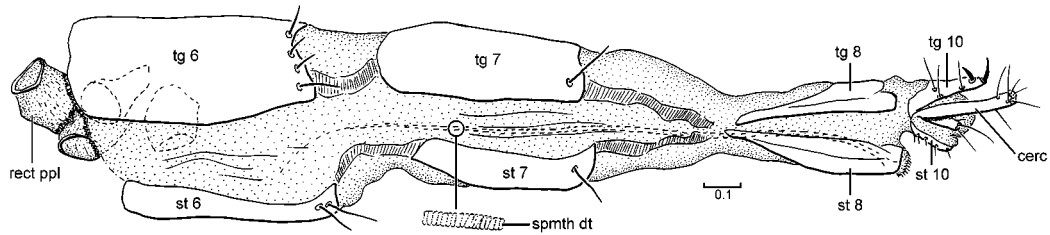


240. *Microphor* sp.

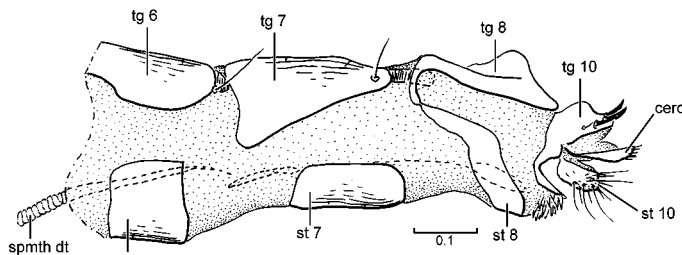
**FIGURES 237–240.** Female terminalia and spermathecae of Empidoidea. **237.** *Niphogenia eucera* Melander, lateral view. **238.** *Schistostoma armipes* (Melander), lateral view. **239.** *Schistostoma armipes* (Melander), dorsal view, spermatheca on left side. **240.** *Microphor* sp. dorsal view, spermatheca on left side. Abbreviations: apod—apodeme, cerc—cercus, spmth—spermatheca, st—sternite 7, 8 and 10, tg—tergite 6, 7, 8 and 10. Scale in mm.



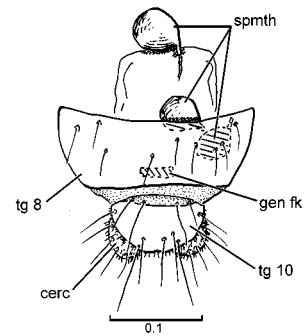
**FIGURES 241–245.** Female terminalia and spermathecae of Empidoidea. **241.** *Microphorella* sp., dorsal view. **242.** *Amphithalassius latus* Ulrich, lateral view. **243.** *Amphithalassius latus* Ulrich, dorsal view. **244.** *Parathalassius aldrichi* Melander, dorsal view. **245.** *Hercostomus* sp., spermatheca and duct. Abbreviations: cerc—cercus, spmth—spermatheca, spmth dt—spermathecal duct, st—sternite 8 and 10, tg—tergite 6, 7, 8 and 10. Scale in mm.



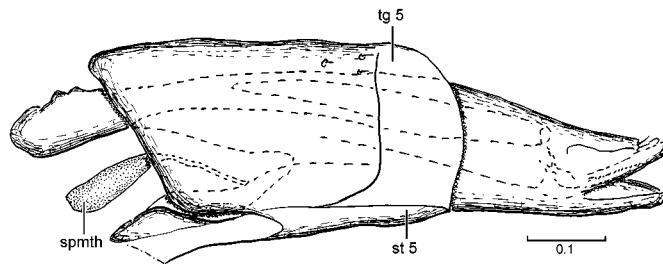
246. *Heteropsilopus squamifer*



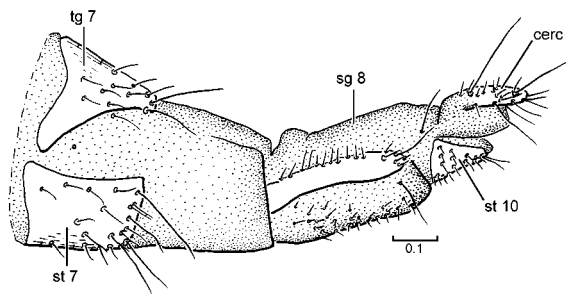
247. *Sympycnus anomalipennis*



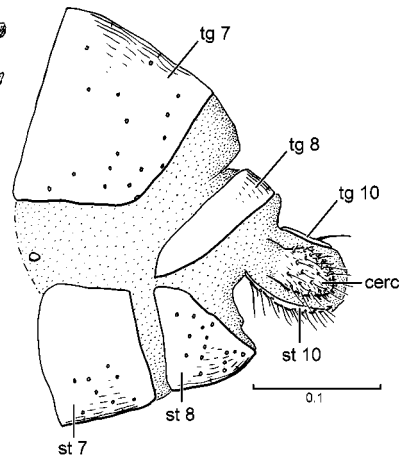
248. *Microsania* sp.



249. *Opetia nigra*

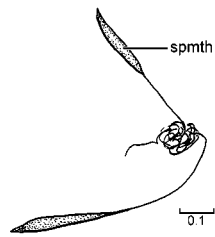
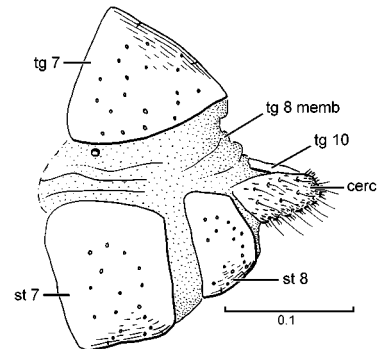
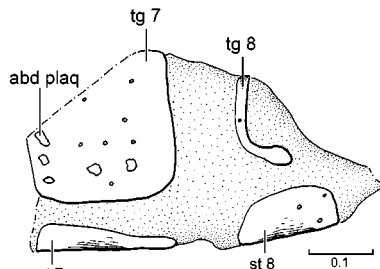
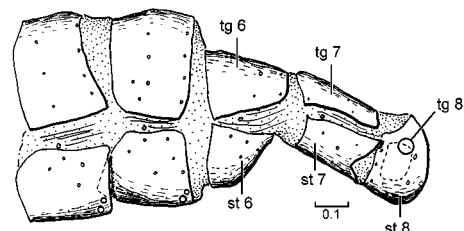
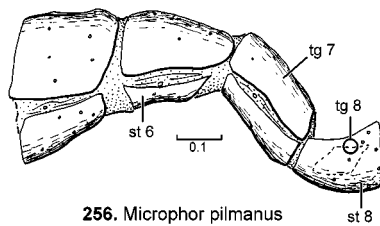
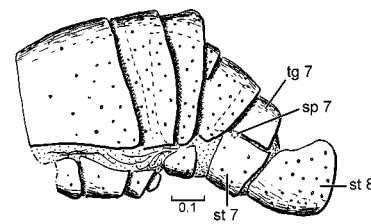
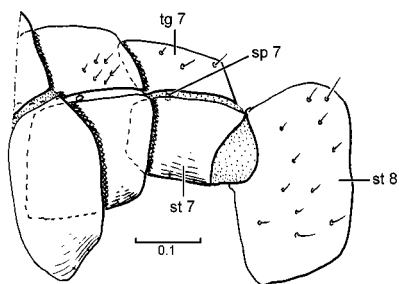
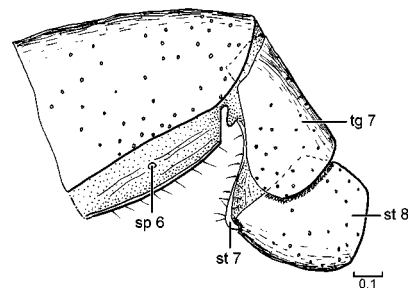


250. *Sciadocera rufomaculata*

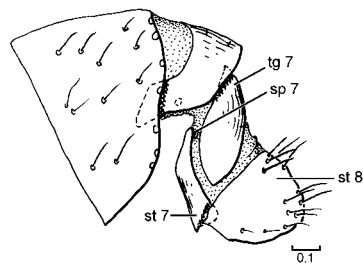


251. *Lonchoptera* sp.

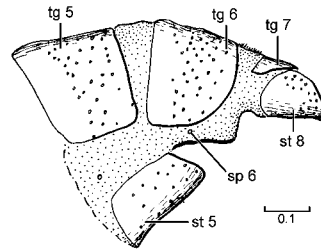
**FIGURES 246–251.** Female terminalia of Empidoidea and Cyclorrhapha. **246.** Empidoidea, *Heteropsilopus squamifer* Hardy, lateral view, spermathecal duct below. **247.** Empidoidea, *Sympycnus anomalipennis* Becker, lateral view. **248.** Platypezidae, *Microsania* sp., dorsal view. **249.** Opetiidae, *Opetia nigra* Meigen, lateral view. **250.** Sciadoceridae, *Sciadocera rufomaculata* White, lateral view. **251.** Lonchopteridae, *Lonchoptera* sp., lateral view. Abbreviations: cerc—cercus, gen fk—genital fork, rect ppl, rectal papillae, seg—segment 8, spnth—spermatheca, spnth dt—spermathecal duct, st—sternite 5, 6, 7, 8 and 10, tg—tergite 5, 6, 7, 8 and 10. Scale in mm.

252. *Lonchoptera* sp.253. *Lonchoptera uniseta*254. *Meghyperus* sp.255. *Schistostoma armipes*256. *Microphor pilmanus*257. *Parathalassius aldrichi*258. *Microphorella* sp.259. *Heteropsilopus squamifer*

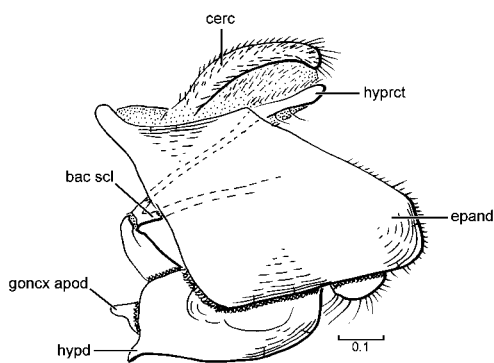
**FIGURES 252–259.** Female terminalia, spermathecae, and male postabdomen of Empidoidea and Cyclorrhapha. **252.** Lonchopteridae, *Lonchoptera* sp, spermathecae. **253.** Lonchopteridae, *Lonchoptera uniseta* Curran, lateral view. **254.** Empidoidea, *Meghyperus* sp., male postabdomen, lateral view. **255.** Empidoidea, *Schistostoma armipes* (Melandar), male postabdomen, lateral view. **256.** Empidoidea, *Microphor pilmanus* (Strobl), male postabdomen, lateral view. **257.** Empidoidea, *Parathalassius aldrichi* Melander, male postabdomen, lateral view. **258.** Empidoidea, *Microphorella* sp., male postabdomen, lateral view. **259.** Empidoidea, *Heteropsilopus squamifer* Hardy, male postabdomen, lateral view. Abbreviations: abd plaq—abdominal plaque, cerc—cercus, sp—spiracle 6 and 7, spmth—spermatheca, st—sternite 6, 7 and 8, tg—tergite 6, 7, 8 and 10, tg memb—tergal membrane. Scale in mm.



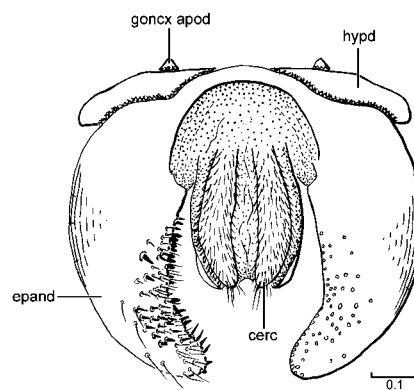
260. *Dolichopus ziczac*



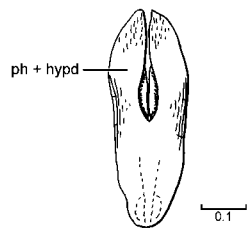
261. *Sympycnus anomalipennis*



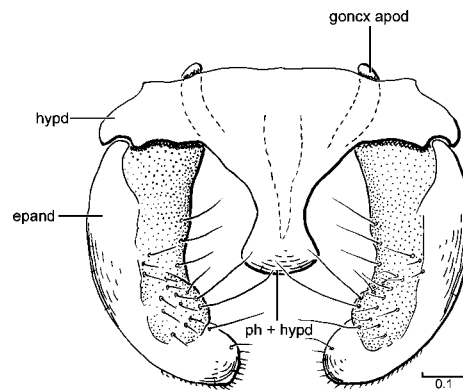
262. *Homalocnemis adelensis*



263. *Homalocnemis adelensis*



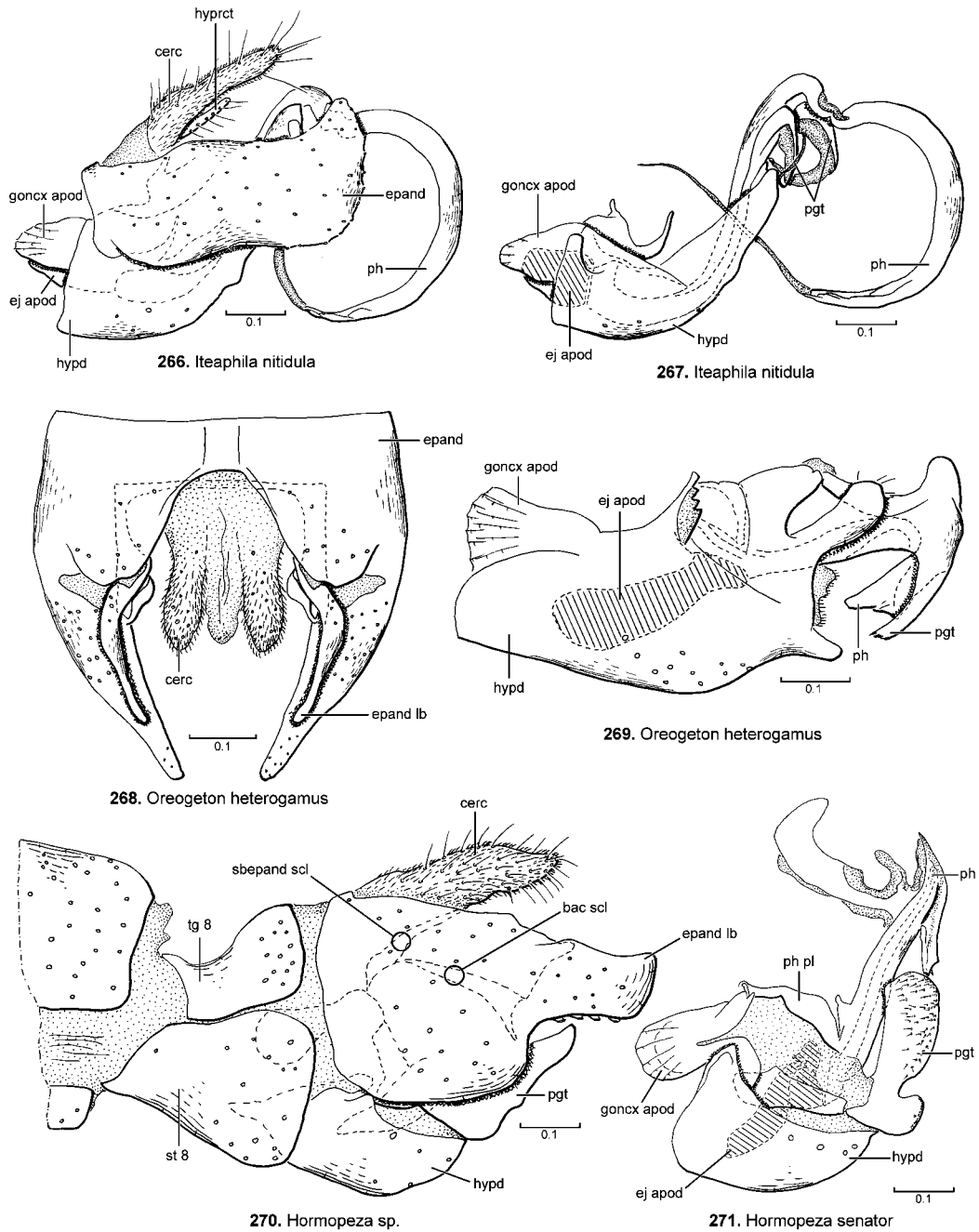
264. *Homalocnemis adelensis*



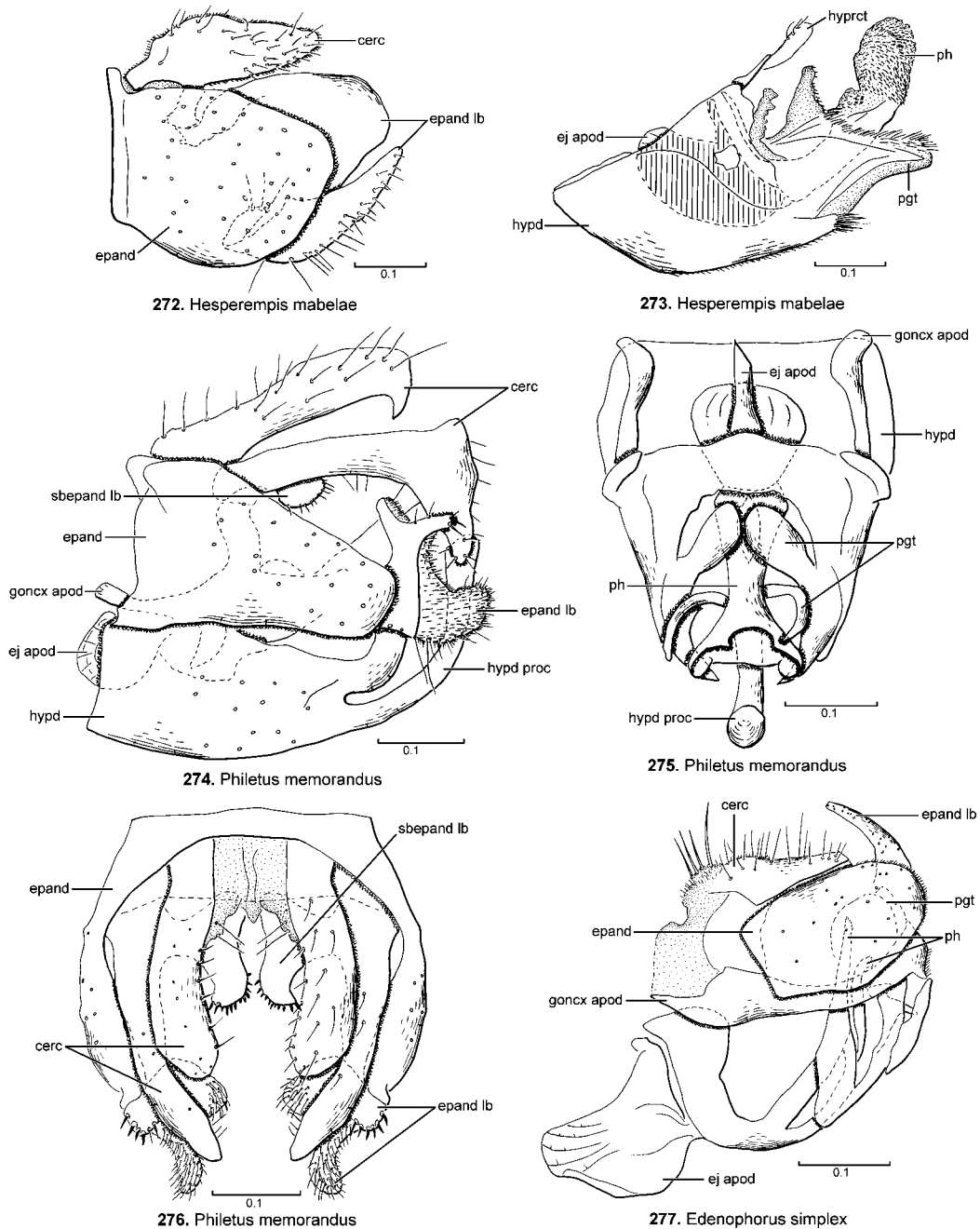
265. *Homalocnemis adelensis*

**FIGURES 260–265.** Male postabdomen and terminalia of Empidoidea. **260.** *Dolichopus ziczac* Wiedemann group, male postabdomen, lateral view. **261.** *Sympycnus anomalipennis* Becker, male postabdomen, lateral view. **262–265.** *Homalocnemis adelensis* (Miller), male terminalia: **262.** lateral view. **263.** dorsal view. **264.** hypandrium—phallic complex, lateral view. **265.** ventral view. Abbreviations: bac scl—bacilliform sclerite, cerc—cercus, epand—epandrium, goncx apod—gonocoxal apodeme, hypd—hypandrium, hypcrct—hypoproct, ph—phallus, sp—spiracle 6 and 7, st—sternite 5, 7 and 8, tg—tergite 5, 6 and 7. Scale in mm.

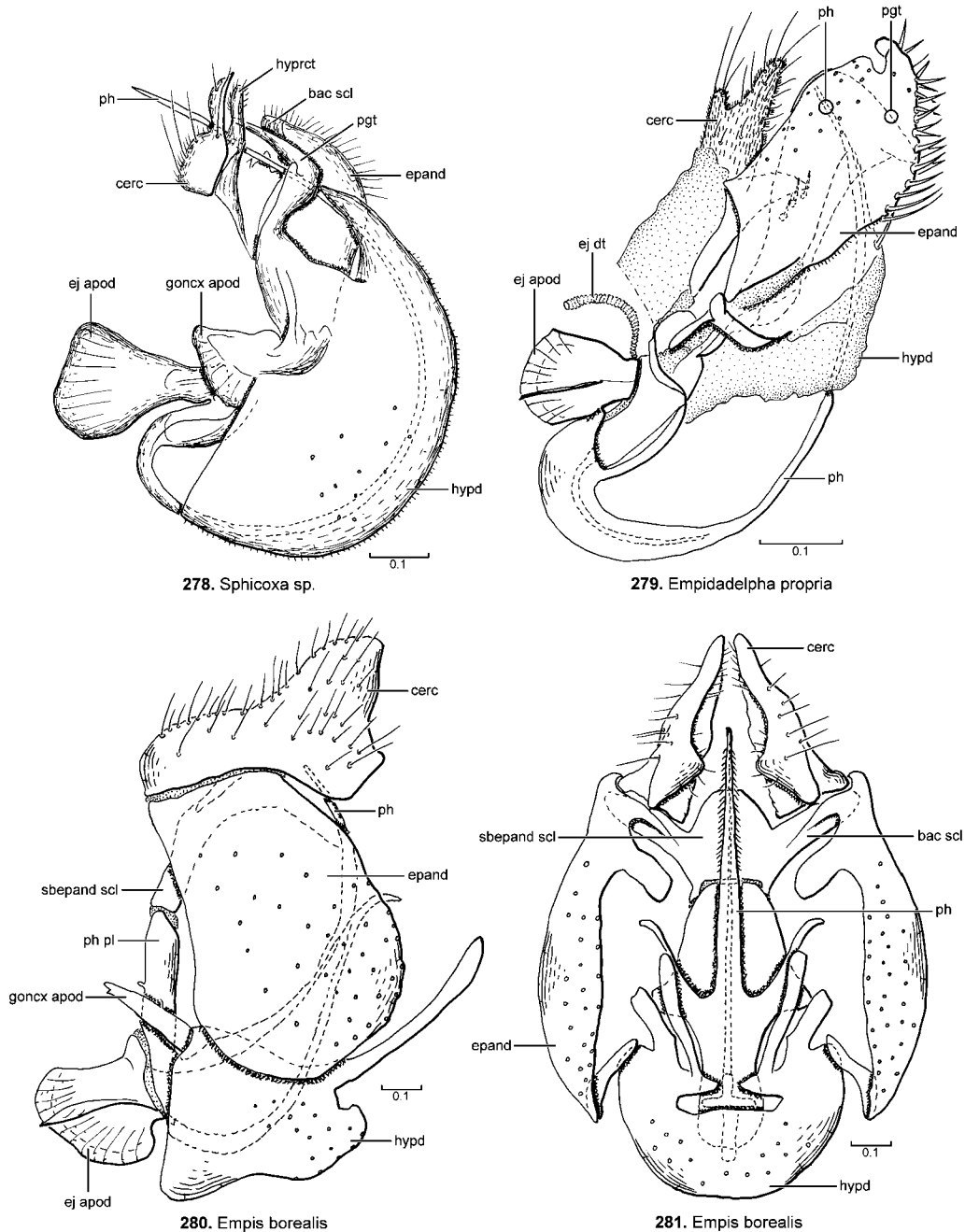




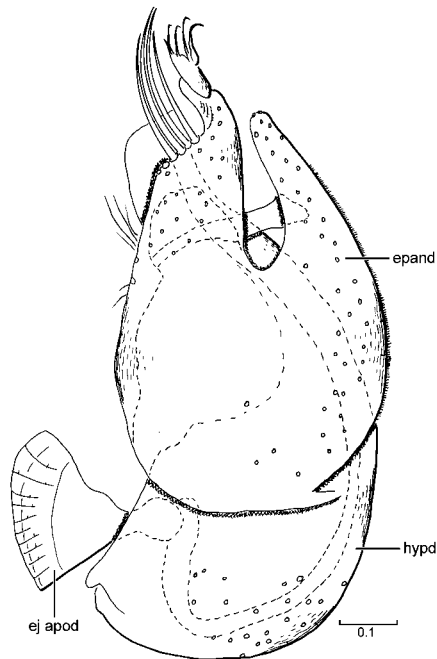
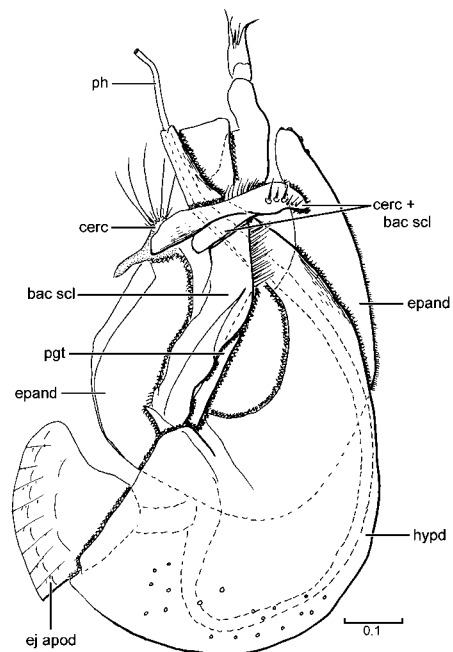
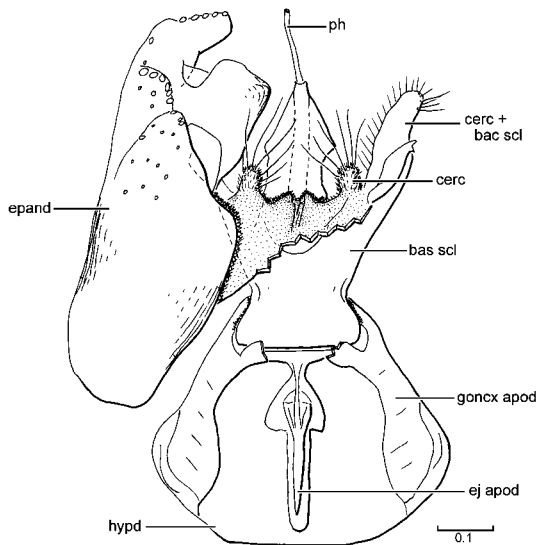
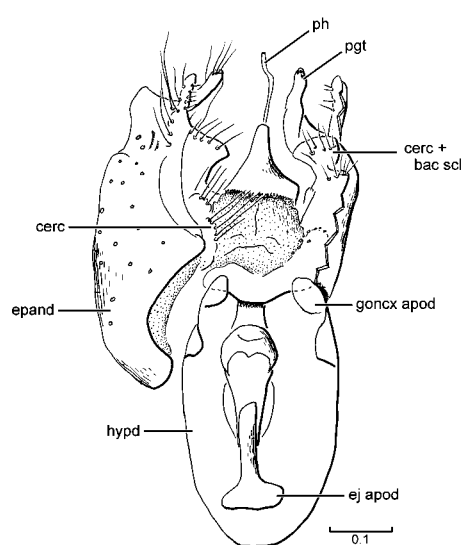
**FIGURES 266–271.** Male terminalia of Empidoidea. **266.** *Iteaphila nitidula* Zetterstedt, lateral view. **267.** *Iteaphila nitidula* Zetterstedt, hypandrium and phallus, lateral view. **268–269.** *Oreogeton heterogamus* Melander: **268.** epandrium and proctiger, dorsal view. **269.** hypandrium and phallus, lateral view. **270.** *Hormopeza* sp., lateral view. **271.** *Hormopeza senator* Melander, hypandrium and phallus, lateral view. Abbreviations: bac scl—bacilliform sclerite, cerc—cercus, ej apod—ejaculatory apodeme, epand—epandrium, epand lb—epandrial lobe, goncx apod—gonocoxal apodeme, hypd—hypandrium, hypcrct—hypoproct, pgt—postgonite, ph—phallus, sbepand scl—subepandrial sclerite, st—sternite 8, tg—tergite 8. Scale in mm.



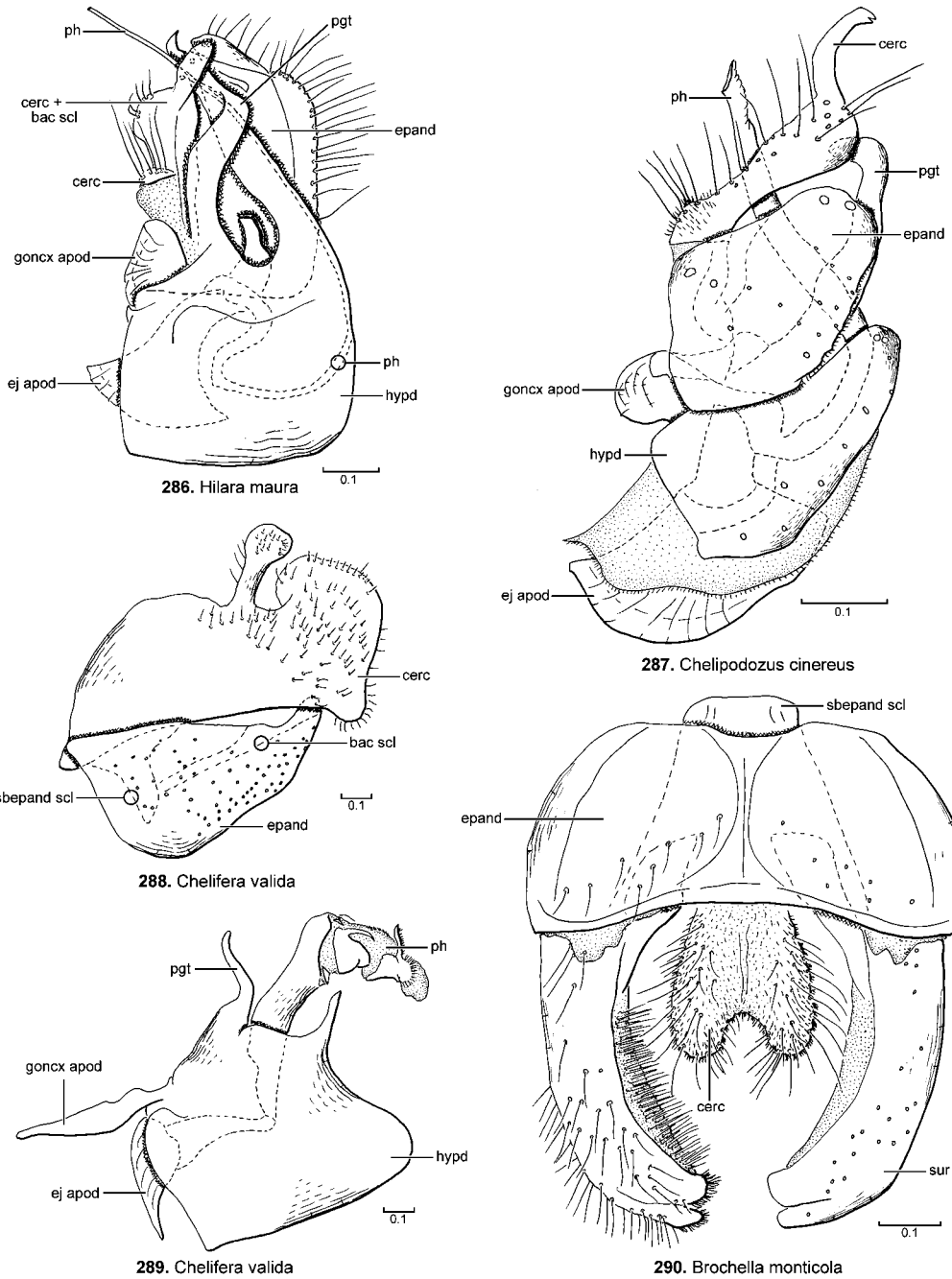
**FIGURES 272–277.** Male terminalia of Empidoidea. **272–273.** *Hesperempis mabelae* Melander: **272.** epandrium and cercus, lateral view. **273.** hypandrium and phallus, lateral view. **274–276.** *Philetus memorandum* Melander: **274.** lateral view. **275.** hypandrium and phallus, dorsal view. **276.** epandrium and proctiger, dorsal view. **277.** *Edenophorus simplex* Sinclair, lateral view. Abbreviations: cerc—cercus, ej apod—ejaculatory apodeme, epand—epandrium, epand lb—epandrial lobe, goncx apod—gonocoxal apodeme, hypd—hypandrium, hypd proc—hypandrial process, hyprct—hypoproct, pgt—postgonite, ph—phallus, sbepand lb—subepandrial lobe. Scale in mm.



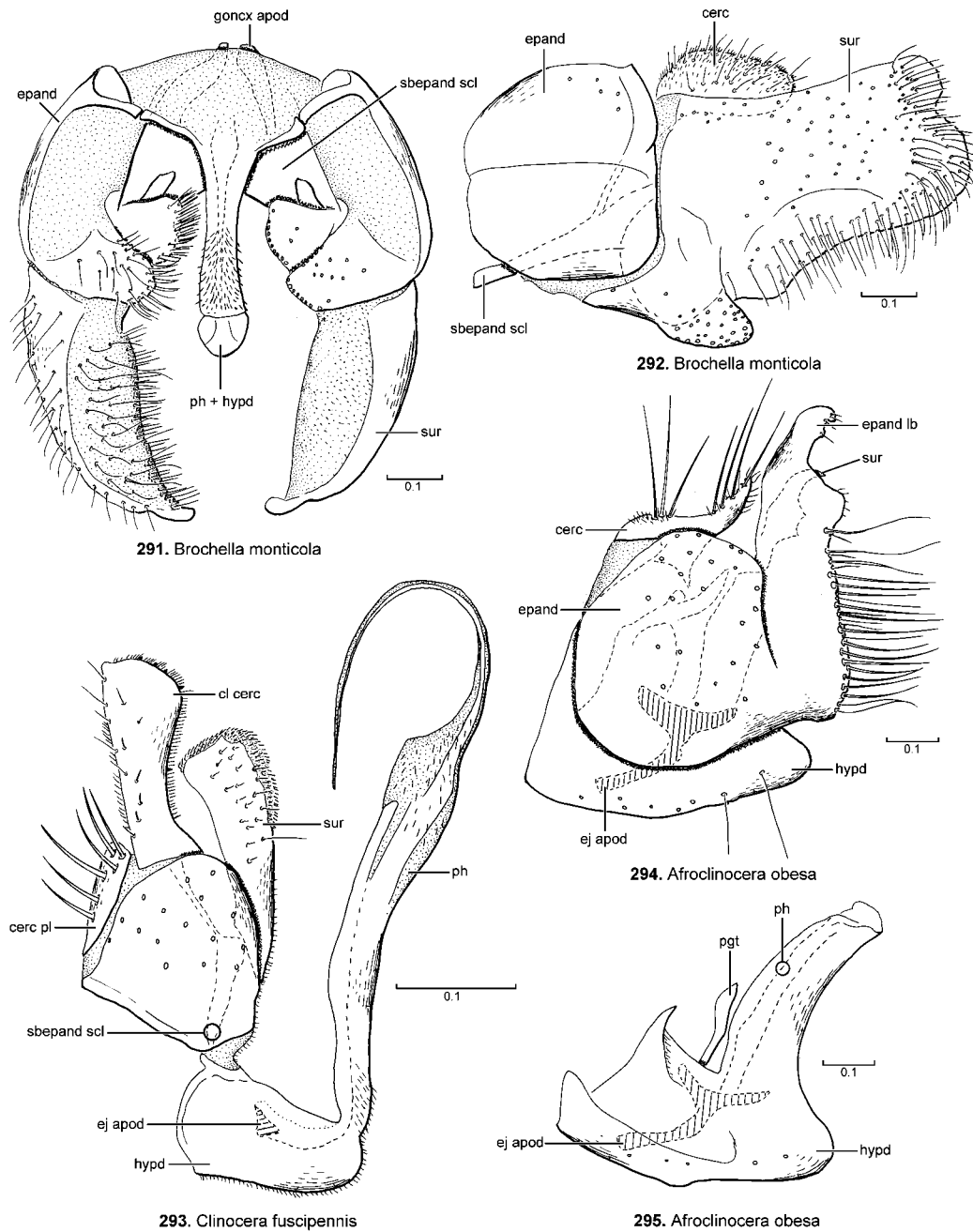
**FIGURES 278–281.** Male terminalia of Empidoidea. **278.** *Sphicoxa* sp., lateral view. **279.** *Empidadelpha propria* Collin, lateral view. **280.** *Empis borealis* L., lateral view. **281.** *Empis borealis* L., posterior view. Abbreviations: bac scl—bacilliform sclerite, cerc—cercus, ej apod—ejaculatory apodeme, ej dt—ejaculatory duct, epand—epandrium, goncx apod—gonocoxal apodeme, hypd—hypandrium, hyprct—hypoproct, pgt—postgonite, ph—phallus, ph pl—phallic plate, sbepand scl—subepandrial sclerite. Scale in mm.

282. *Hilarempis facilis*283. *Hilarempis facilis*284. *Hilarempis facilis*285. *Hilara maura*

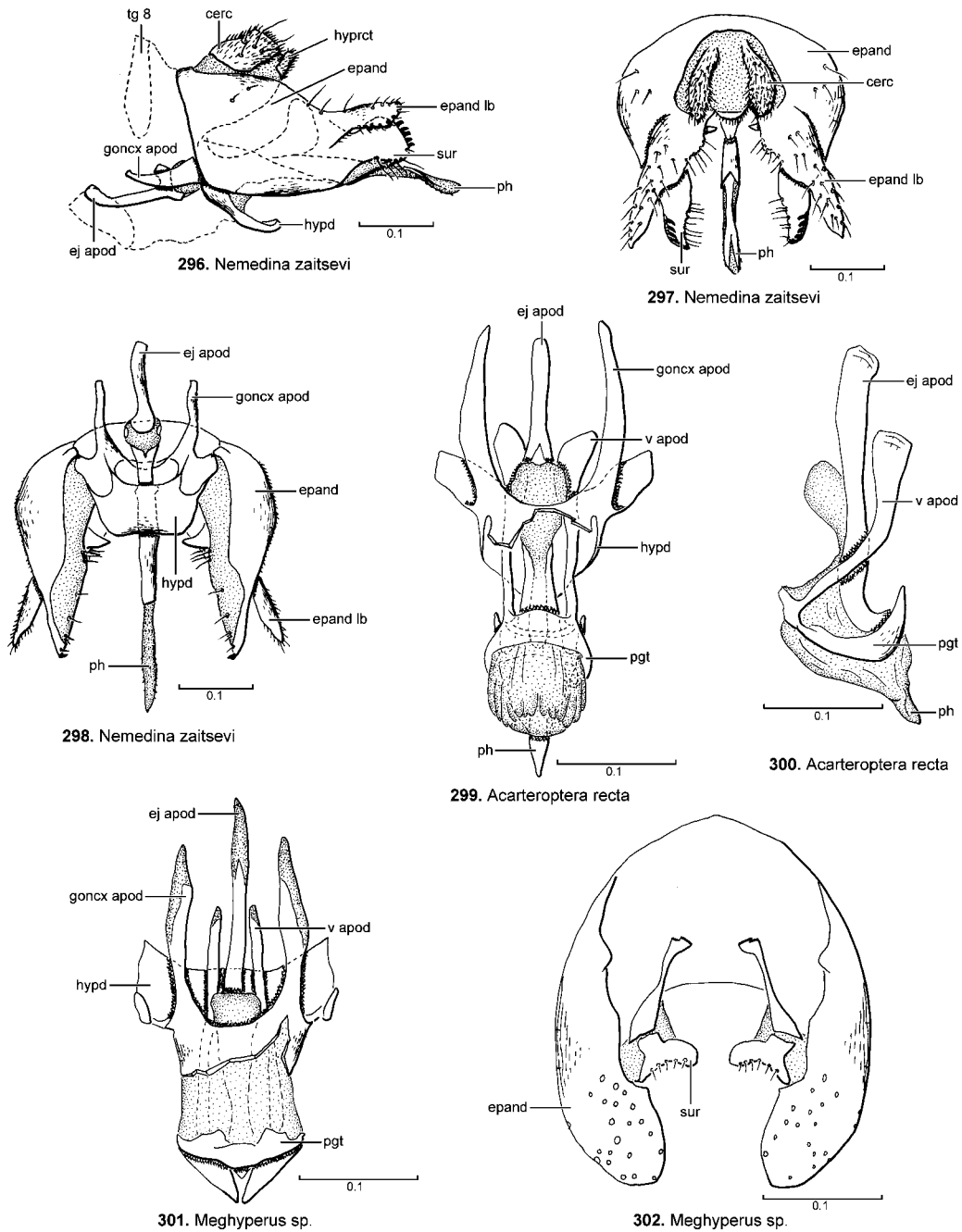
**FIGURES 282–285.** Male terminalia of Empidoidea. **282–284.** *Hilarempis facilis* Collin: **282.** lateral view. **283.** left epandrial lamella removed, lateral view. **284.** left epandrial lamella removed, anterior view. **285.** *Hilara maura* (Fab.), left epandrial lamella removed, anterior view. Abbreviations: bac scl—bacilliform sclerite, cerc—cercus, ej apod—ejaculatory apodeme, epand—epandrium, goncx apod—gonocoxal apodeme, hypd—hypandrium, pgt—postgonite, ph—phallus. Scale in mm.



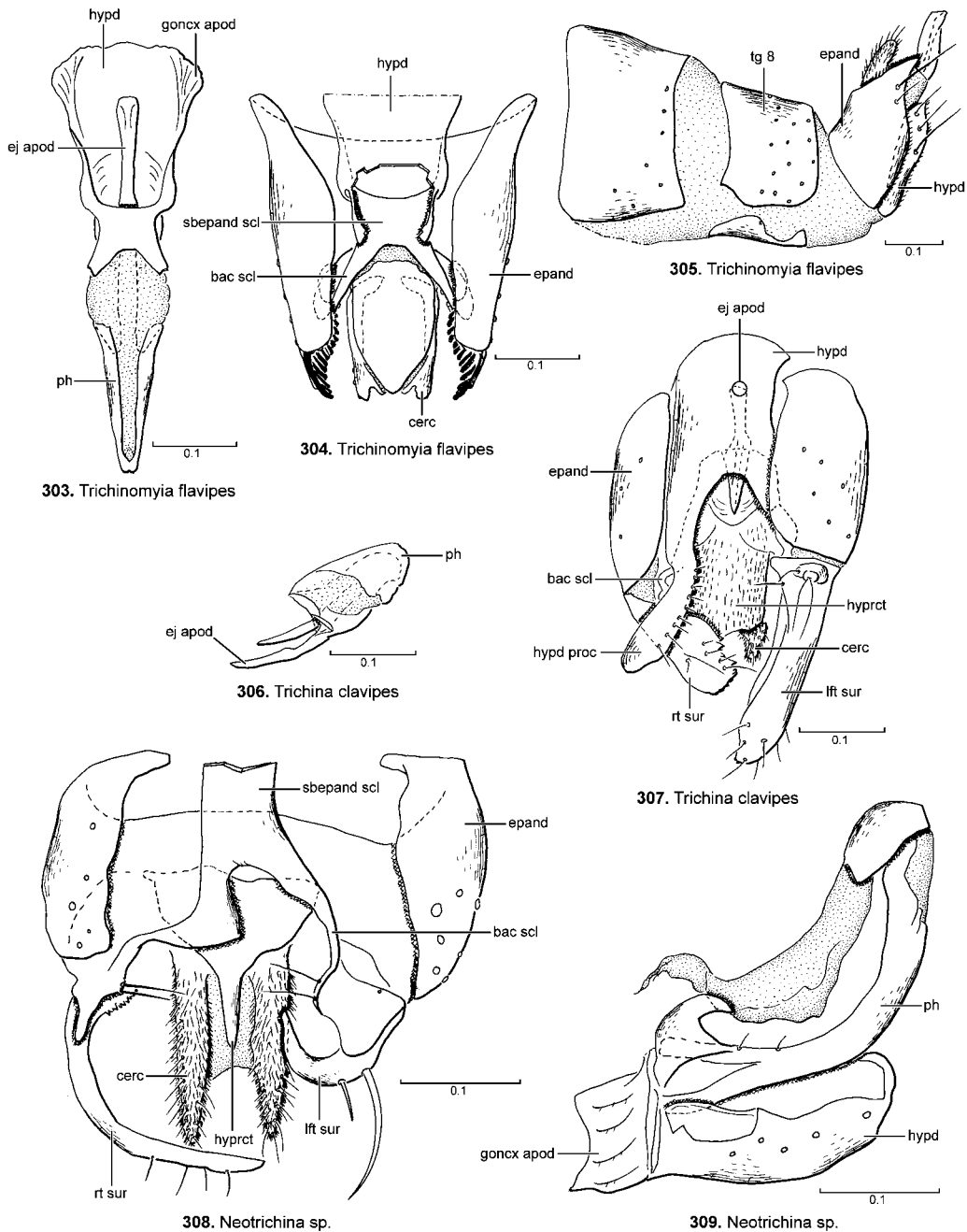
**FIGURES 286–290.** Male terminalia of Empidoidea. **286.** *Hilara maura* (Fab.), left epandrial lamella removed, lateral view. **287.** *Chelipodozus cinereus* Collin, lateral view. **288–289.** *Chelifera valida* Loew: **288.** epandrium and proctiger, lateral view. **289.** hypandrium and phallus, lateral view. **290.** *Brochella monticola* Melander, epandrium and proctiger, dorsal view. Abbreviations: bac scl—bacilliform sclerite, cerc—cercus, ej apod—ejaculatory apodeme, epand—epandrium, goncx apod—gonocoxal apodeme, hypd—hypandrium, pgt—postgonite, ph—phallus, sbepand scl—subepandrial sclerite, sur—surstylus. Scale in mm.



**FIGURES 291–295.** Male terminalia of Empidoidea. **291–292.** *Brochella monticola* Melander: **291.** ventral view. **292.** epandrium and proctiger, lateral view. **293.** *Clinocera fuscipennis* Loew, lateral view. **294–295.** *Afroclinocera obesa* Sinclair: **294.** lateral view. **295.** hypandrium and phallus, lateral view. Abbreviations: cerc—cercus, cerc pl—cercal plate, cl cerc—clasper cercus, ej apod—ejaculatory apodeme, epand—epandrium, epand lb—epandrial lobe, goncx apod—gonocoxal apodeme, hypd—hypandrium, pgd—postgonite, ph—phallus, sbepand scl—subepandrial sclerite, sur—surstylus. Scale in mm.

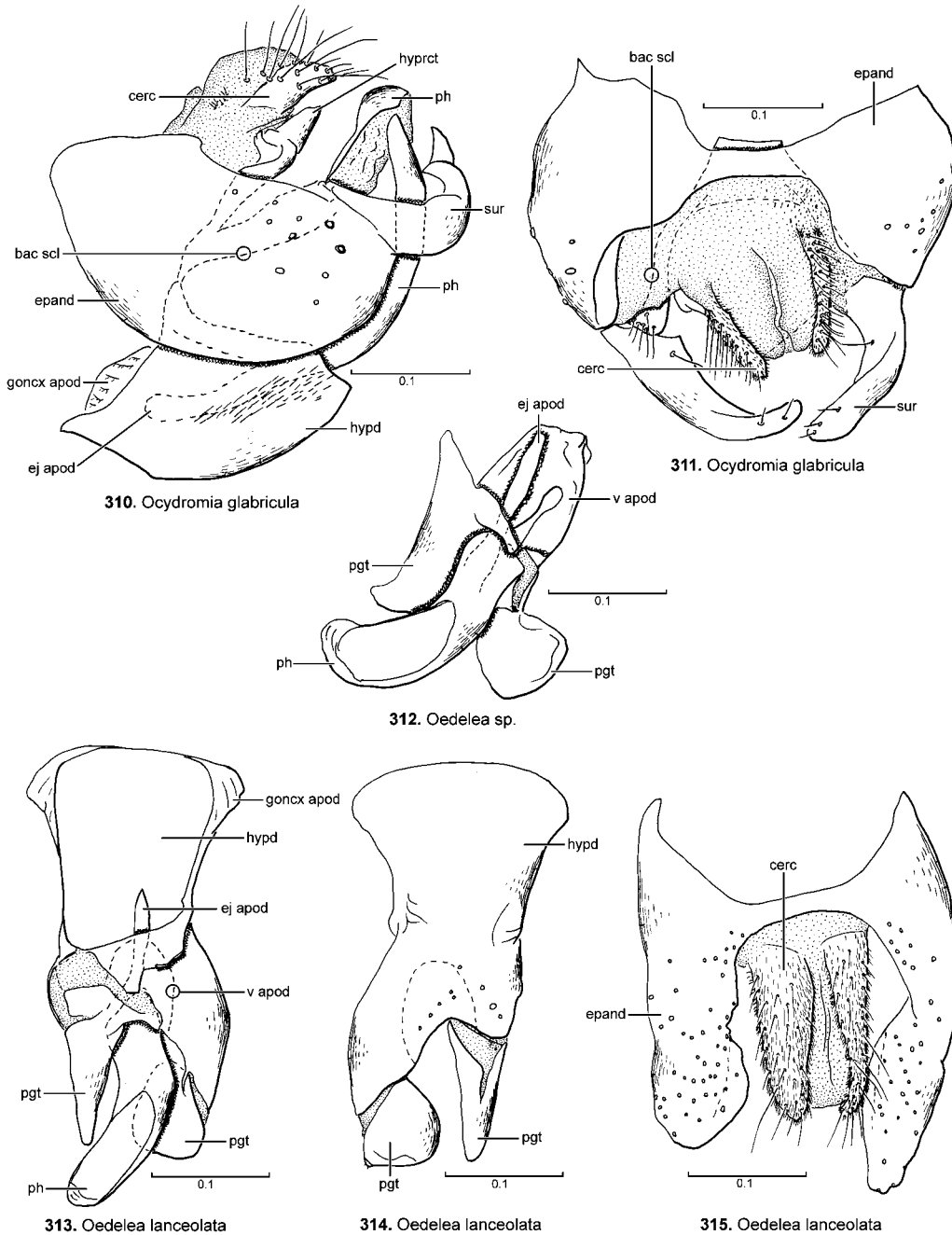


**FIGURES 296–302.** Male terminalia of Empidoidea. **296–298.** *Nemedina zaitsevi* Sinclair & Shamshev: **296.** lateral view. **297.** dorsal view. **298.** ventral view. **299–300.** *Acarteroptera recta* Collin: **299.** epandrium and proctiger removed, dorsal view. **300.** phallic and postgonite complex, lateral view. **301–302.** *Meghyperus* sp.: **301.** epandrium and proctiger removed, dorsal view. **302.** epandrium and surstyli, ventral view. Abbreviations: cerc—cercus, ej apod—ejaculatory apodeme, epand—epandrium, epand lb—epandrial lobe, goncx apod—gonocoxal apodeme, hypd—hypandrium, hyprct—hypoproct, pgt—postgonite, ph—phallus, sur—surstylus, tg—tergite 8, v apod—ventral apodeme. Scale in mm.

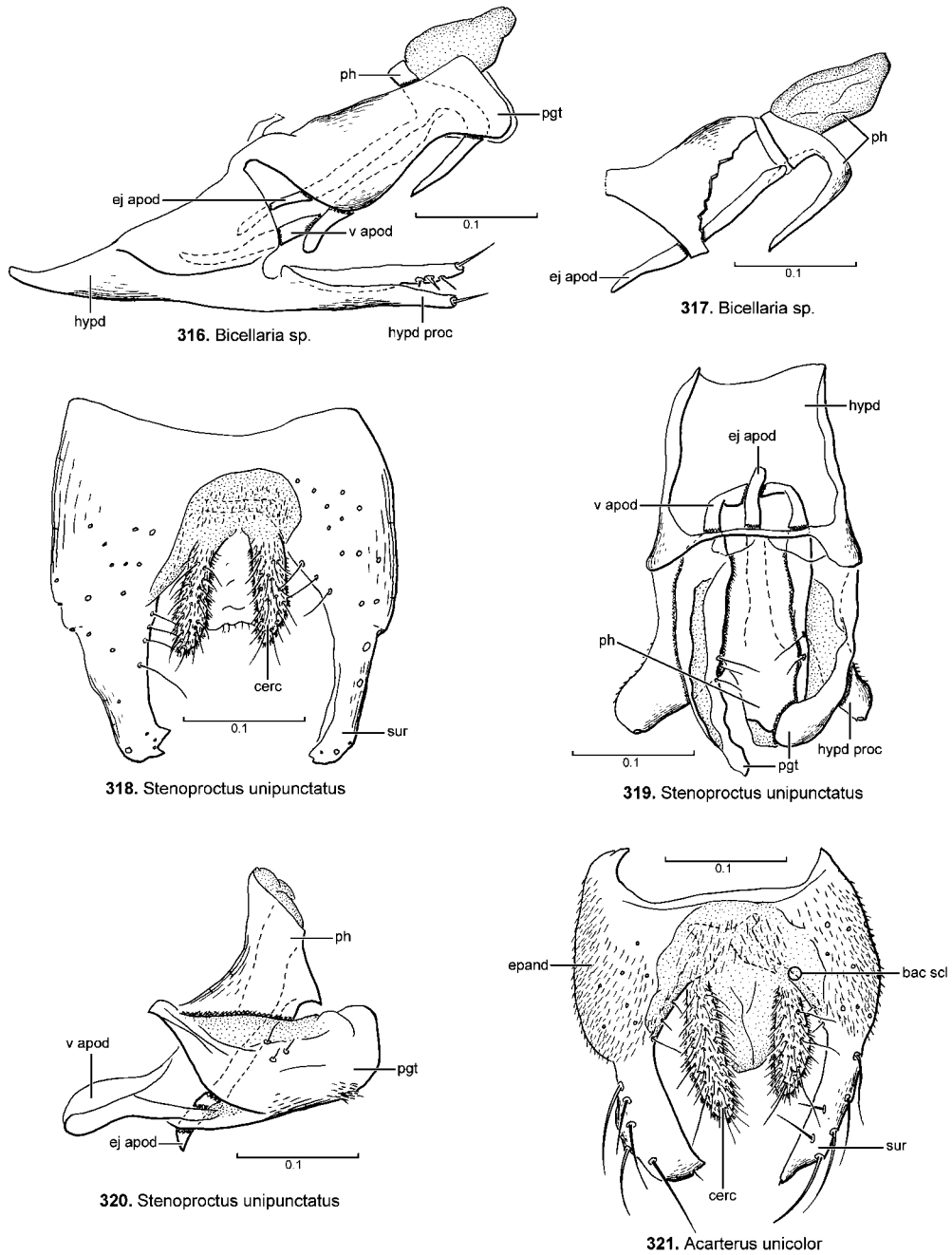


**FIGURES 303–309.** Male terminalia of Empidoidea. **303–305.** *Trichinomyia flavipes* (Zetterstedt): **303.** hypandrium and phallus, dorsal view. **304.** epandrium and proctiger, ventral view. **305.** lateral view. **306–307.** *Trichina clavipes* (Meigen): **306.** phallus, lateral view. **307.** ventral view. **308–309.** *Neotrichina* sp.: **308.** epandrium and proctiger, ventral view. **309.** *Neotrichina* sp., hypandrium and phallus, lateral view. Abbreviations: bac scl—bacilliform sclerite, cerc—cercus, ej apod—ejaculatory apodeme, epand—epandrium, goncx apod—gonocoxal apodeme, hypd—hypandrium, hypd proc—hypandrial process, hyprct—hypoproct, lft sur—left surstylus, pgt—postgonite, ph—phallus, rt sur—right surstylus, sbepand scl—subepandrial sclerite, tg—tergite 8. Scale in mm.

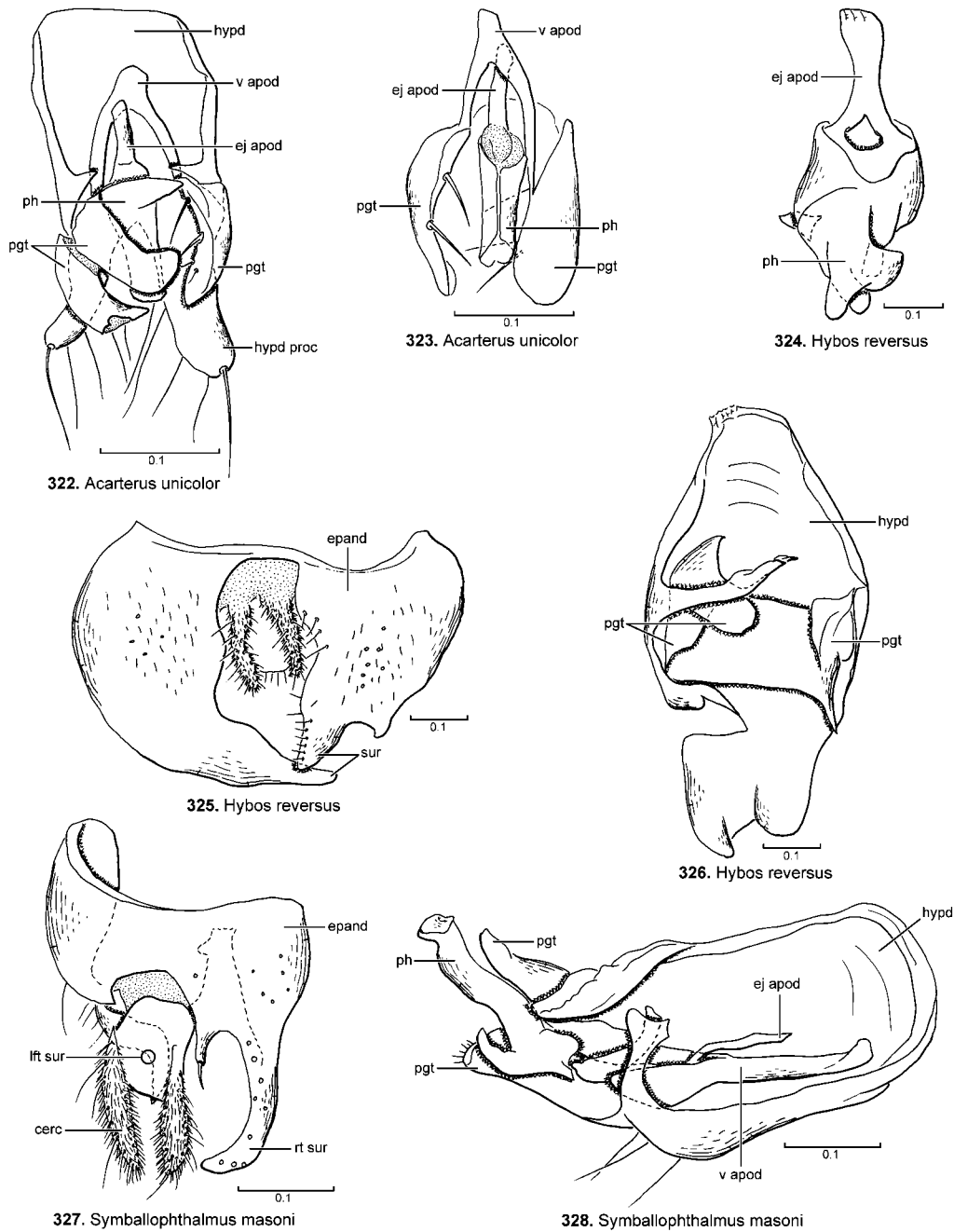




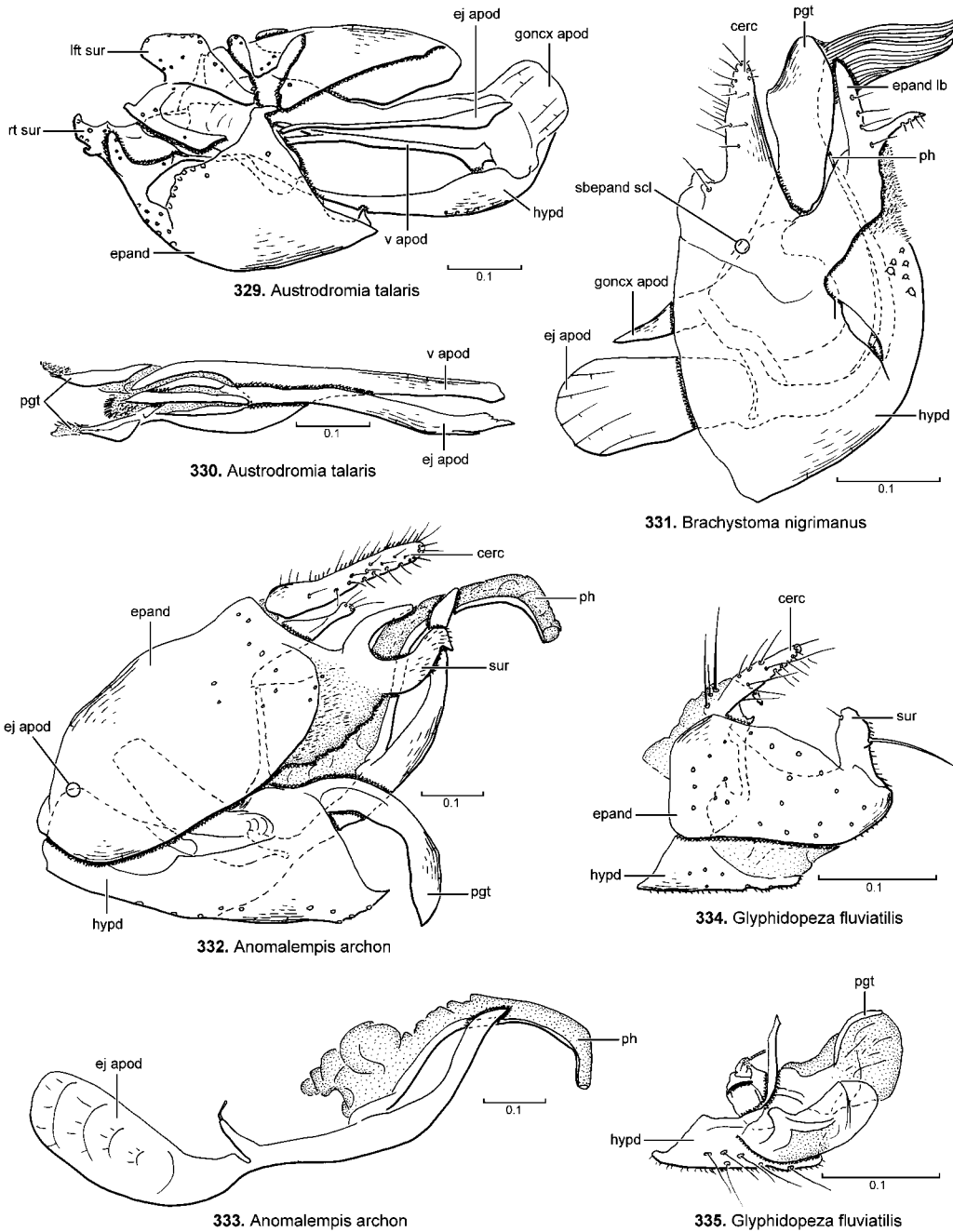
**FIGURES 310–315.** Male terminalia of Empidoidea. **310–311.** *Ocydromia glabricula* (Fallén): **310.** lateral view. **311.** epandrium and proctiger, dorsal view. **312.** *Oedalea* sp., phallus and postgonites, dorsal view. **313–315.** *Oedalea lanceolata* Melander: **313.** hypandrium and phallus, dorsal view. **314.** hypandrium and phallus, ventral view. **315.** epandrium and proctiger, dorsal view. Abbreviations: bac scl—bacilliform sclerite, cerc—cercus, ej apod—ejaculatory apodeme, epand—epandrium, goncx apod—gonocoxal apodeme, hypd—hypandrium, hyprct—hypoproct, pgt—postgonite, ph—phallus, sur—surstylus, v apod—ventral apodeme. Scale in mm.



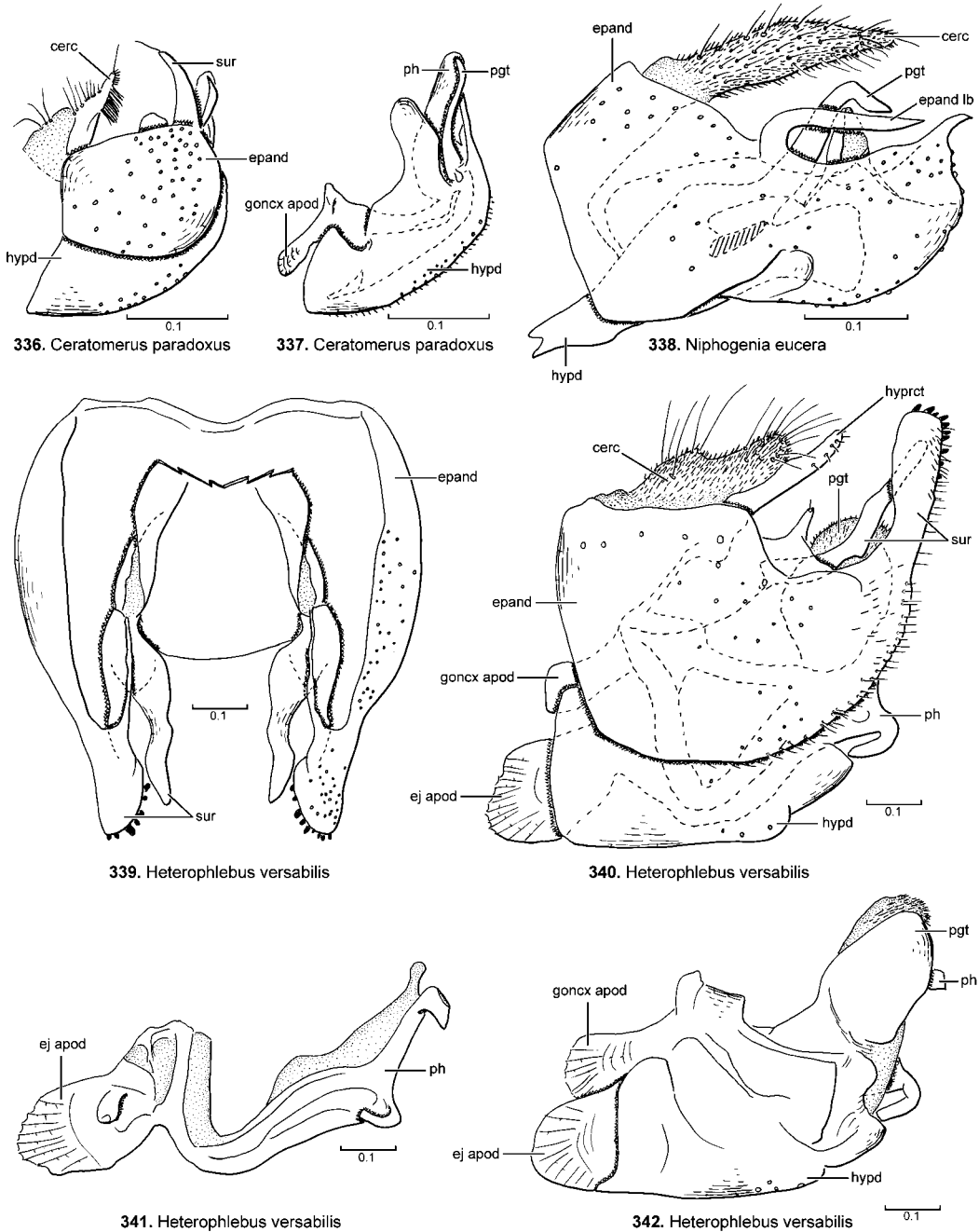
**FIGURES 316–321.** Male terminalia of Empidoidea. **316–317.** *Bicellaria* sp.: **316.** hypandrium and phallus, lateral view. **317.** phallus, lateral view. **318–320.** *Stenoproctus unipunctatus* Loew: **318.** epandrium and proctiger, dorsal view. **319.** hypandrium and phallus, dorsal view. **320.** phallus and postgonite, lateral view. **321.** *Acarterus unicolor* Loew, epandrium and proctiger, dorsal view. Abbreviations: bac scl—bacilliform sclerite, cerc—cercus, ej apod—ejaculatory apodeme, epand—epandrium, hypd—hypandrium, hypd proc—hypandrial process, pgt—postgonite, ph—phallus, sur—surstylus, v apod—ventral apodeme. Scale in mm.



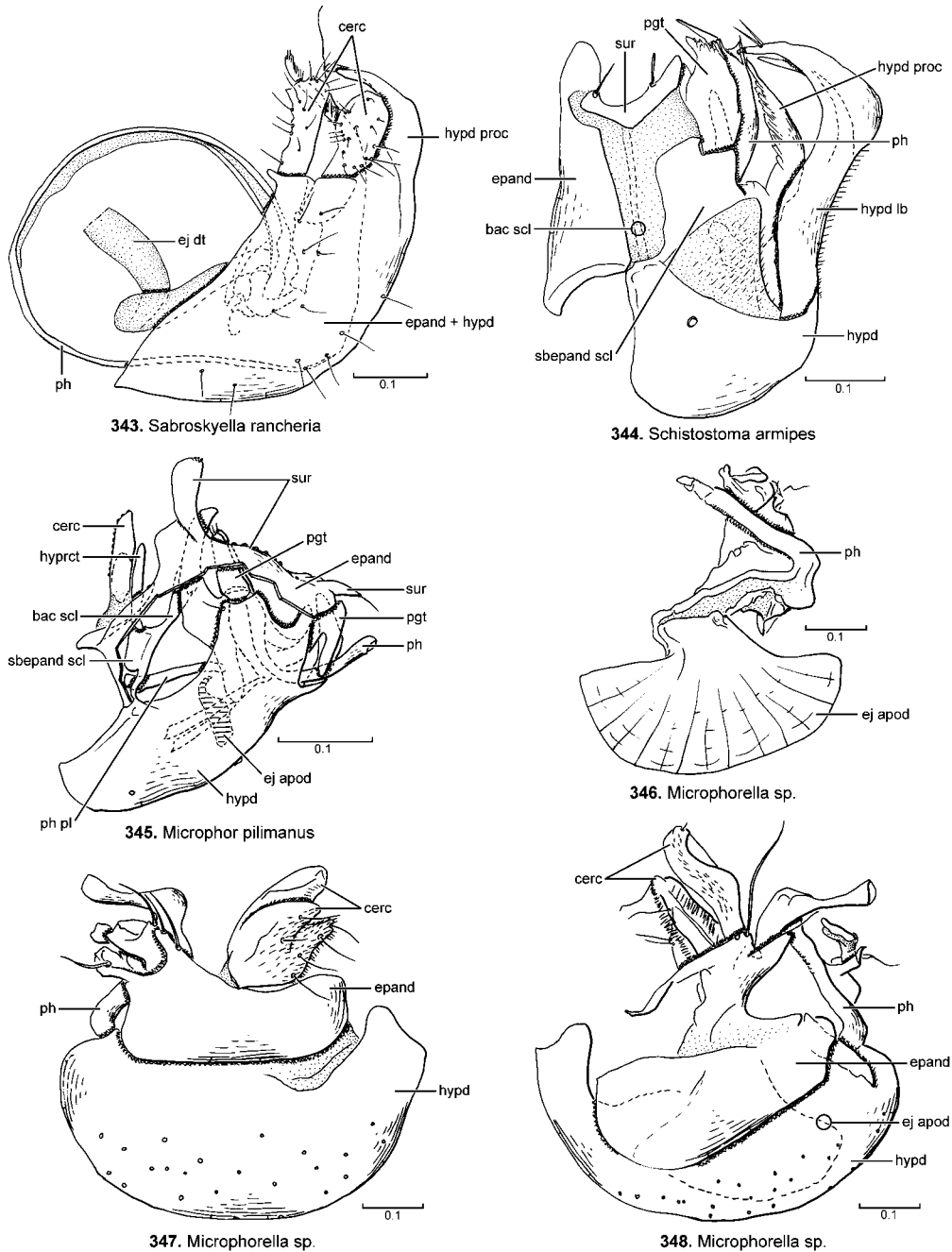
**FIGURES 322–328.** Male terminalia of Empidoidea. **322–323.** *Acarterus unicolor* Loew: **322.** hypandrium and phallus, dorsal view. **323.** phallus and postgonites, ventral view. **324–326.** *Hybos reversus* Walker: **324.** phallus, dorsal view. **325.** epandrium and proctiger, dorsal view. **326.** hypandrium, dorsal view. **327–328.** *Symballophthalmus masoni* Chillcott: **327.** epandrium and proctiger, dorsal view. **328.** hypandrium and phallus, dorsolateral view. Abbreviations: cerc—cercus, ej apod—ejaculatory apodeme, epand—epandrium, hypd—hypandrium, hypd proc—hypandrial process, lft sur—left surstylus, pgt—postgonite, ph—phallus, rt sur—right surstylus, sur—surstylus, v apod—ventral apodeme. Scale in mm.



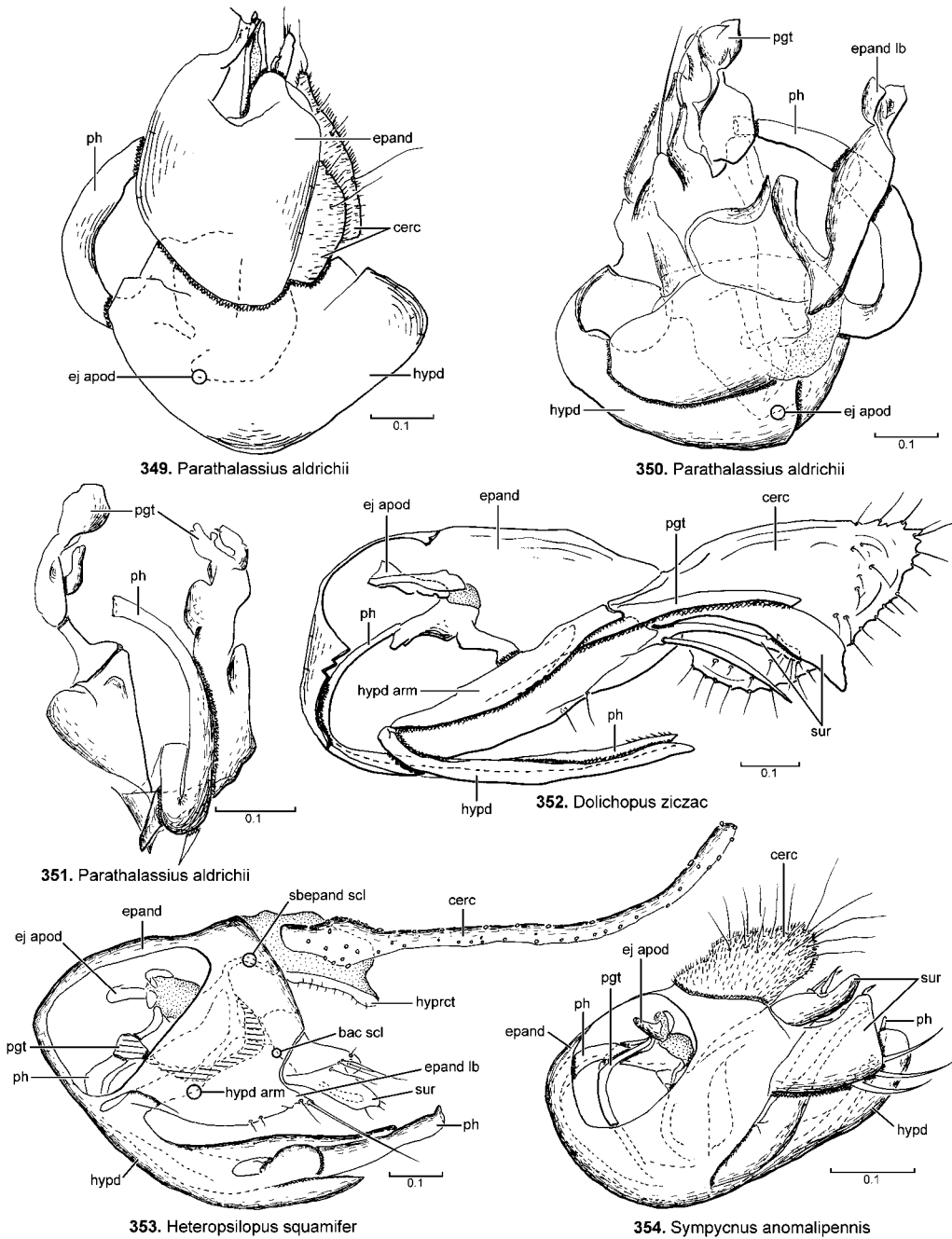
**FIGURES 329–335.** Male terminalia of Empidoidea. **329–330.** *Austrodromia talaris* Collin: **329.** dorsolateral view. **330.** phallus and ventral apodeme, dorsal view. **331.** *Brachystoma nigrimanus* Loew, lateral view. **332–333.** *Anomalempis archon* Melander: **332.** lateral view. **333.** phallus, lateral view. **334–335.** *Glyphidopeza fluviatilis* Sinclair: **334.** lateral view. **335.** hypandrium and phallus, lateral view. Abbreviations: cerc—cercus, ej apod—ejaculatory apodeme, epand—epandrium, epand lb—epandrial lobe, goncx apod—gonocoxal apodeme, hypd—hypandrium, lft sur—left surstylus, pgt—postgonite, ph—phallus, rt sur—right surstylus, sbepand scl—subepandrial sclerite, sur—surstylus, v apod—ventral apodeme. Scale in mm.



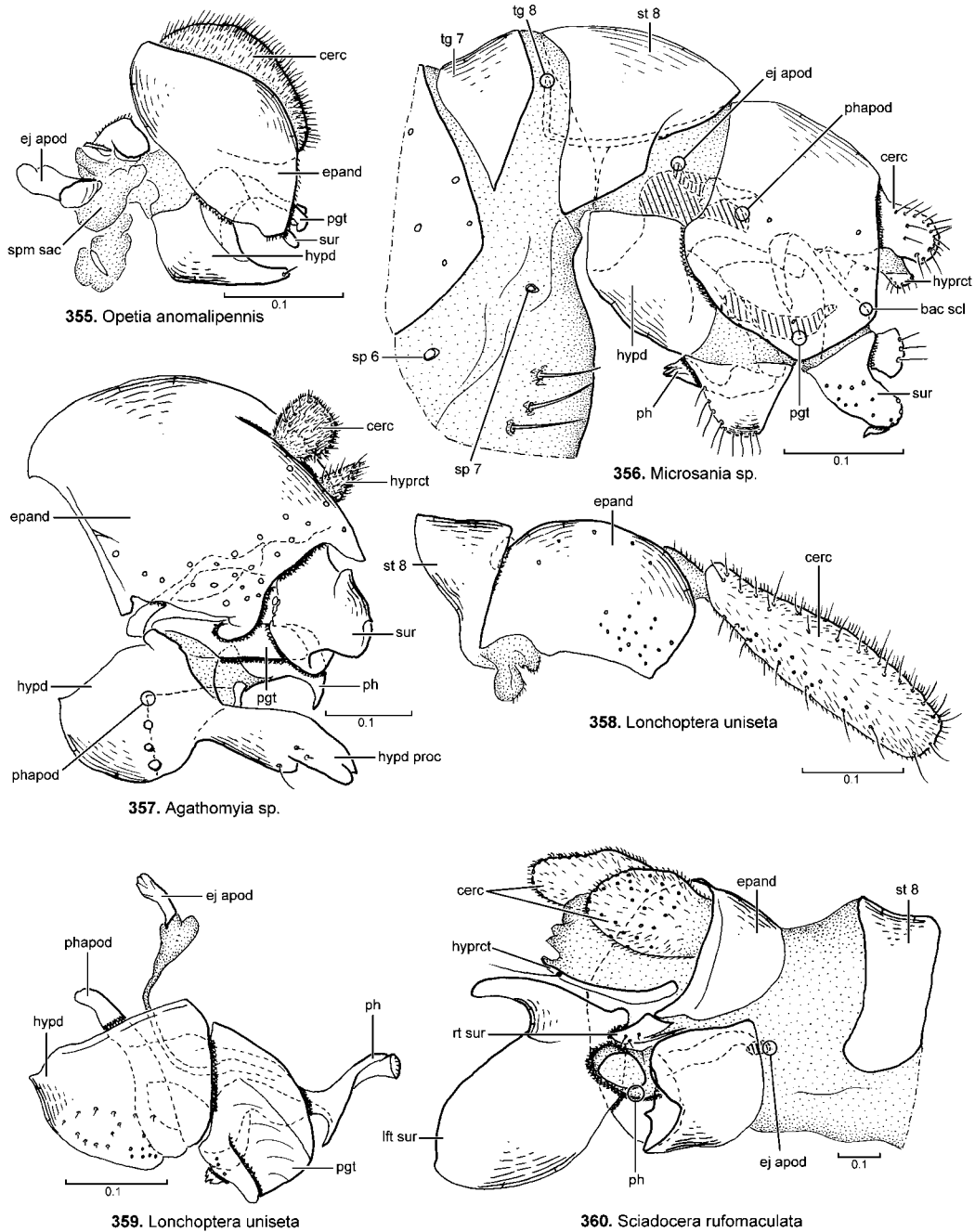
**FIGURES 336–342.** Male terminalia of Empidoidea. **336–337.** *Ceratomerus paradoxus* Philippi: **336.** lateral view. **337.** hypandrium and phallus, lateral view. **338.** *Niphogenia eucera* Melander, lateral view. **339–442.** *Heterophlebus versabilis* (Collin): **339.** epandrium, ventral view. **340.** lateral view. **341.** phallus, lateral view. **342.** hypandrium and phallus, lateral view. Abbreviations: cerc—cercus, ej apod—ejaculatory apodeme, epand—epandrium, epand lb—epandrial lobe, goncx apod—gonocoxal apodeme, hypd—hypandrium, hyprct—hypoproct, pgd—postgonite, ph—phallus, sbepand scl—subepandrial sclerite, sur—surstylus. Scale in mm.



**FIGURES 343–348.** Male terminalia of Empidoidea. **343.** *Sabroskyella rancheria* Wilder, lateral view. **344.** *Schistostoma armipes* (Melander), lateral view. **345.** *Microphor pilimanus* (Strobl), epandrium cut away, lateral view. **346–348.** *Microphorella* sp.: **346.** phallus, lateral view. **347.** right lateral view. **348.** left lateral view. Abbreviations: bac scl—bacilliform sclerite, cerc—cercus, ej apod—ejaculatory apodeme, ej dt—ejaculatory duct, epand—epandrium, hypd—hypandrium, hypd lb—hypandrial lobe, hypd proc—hypandrial process, hyprct—hypoproct, pgt—postgonite, ph—phallus, sbepand scl—subepandrial sclerite, sur—surstylus. Scale in mm.

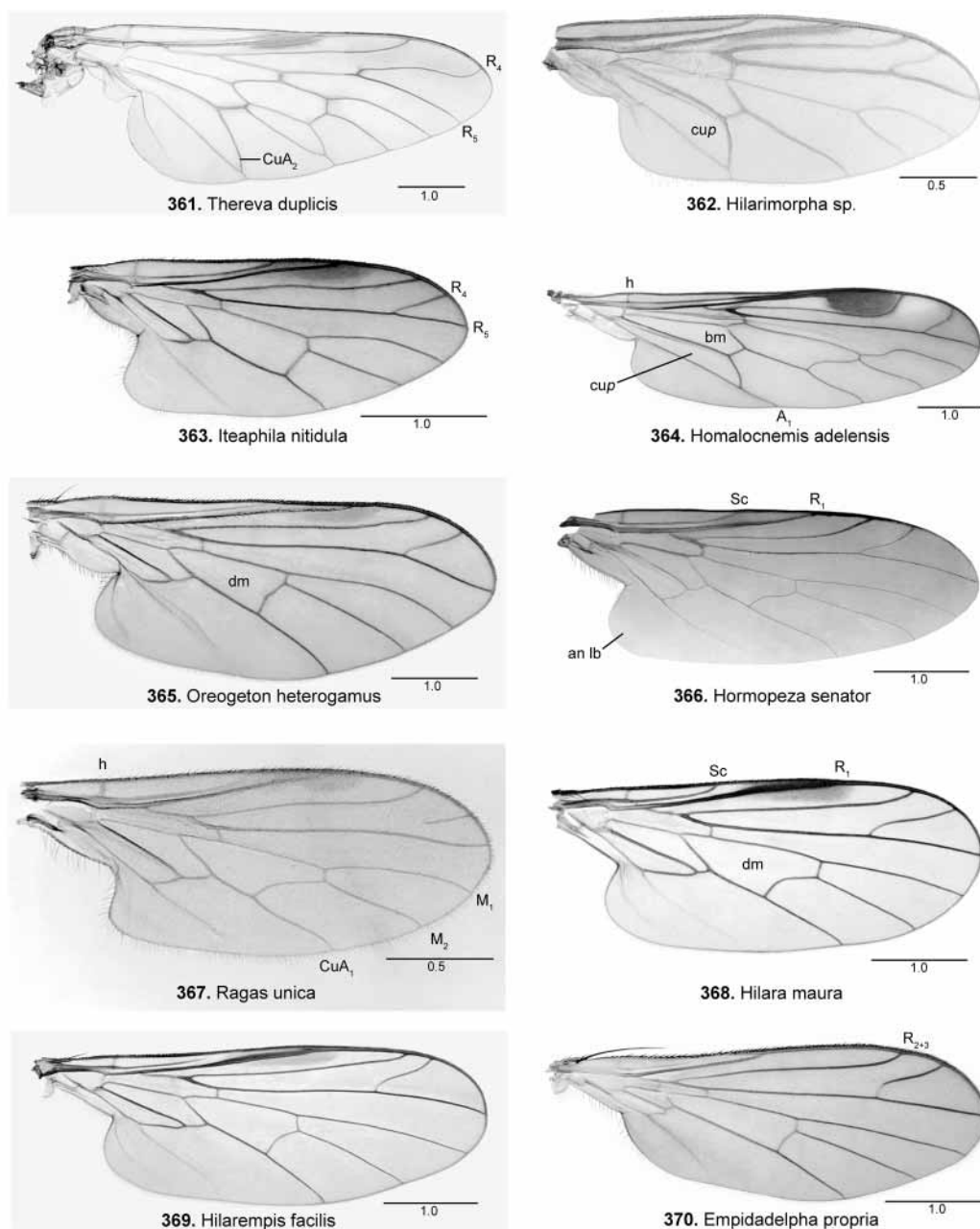


**FIGURES 349–354.** Male terminalia of Empidoidea. **349–351.** *Parathalassius aldrichii* Melander: **349.** right lateral view. **350.** epandrium and proctiger removed, left lateral view. **351.** phallus and postgonites, posterior view. **352.** *Dolichopus ziczac* Wiedemann group, epandrium cut away, lateral view. **353.** *Heteropsilopus squamifer* Hardy, lateral view. **354.** *Sympycnus anomalipennis* Becker, lateral view. Abbreviations: bac scl—bacilliform sclerite, cerc—cercus, ej apod—ejaculatory apodeme, epand—epandrium, epand lb—epandrial lobe, hypd—hypandrium, hypd arm—hypandrial arm, hypcrct—hypoproct, pgt—postgonite, ph—phallus, sbepand scl—subepandrial sclerite, sur—surstylus. Scale in mm.

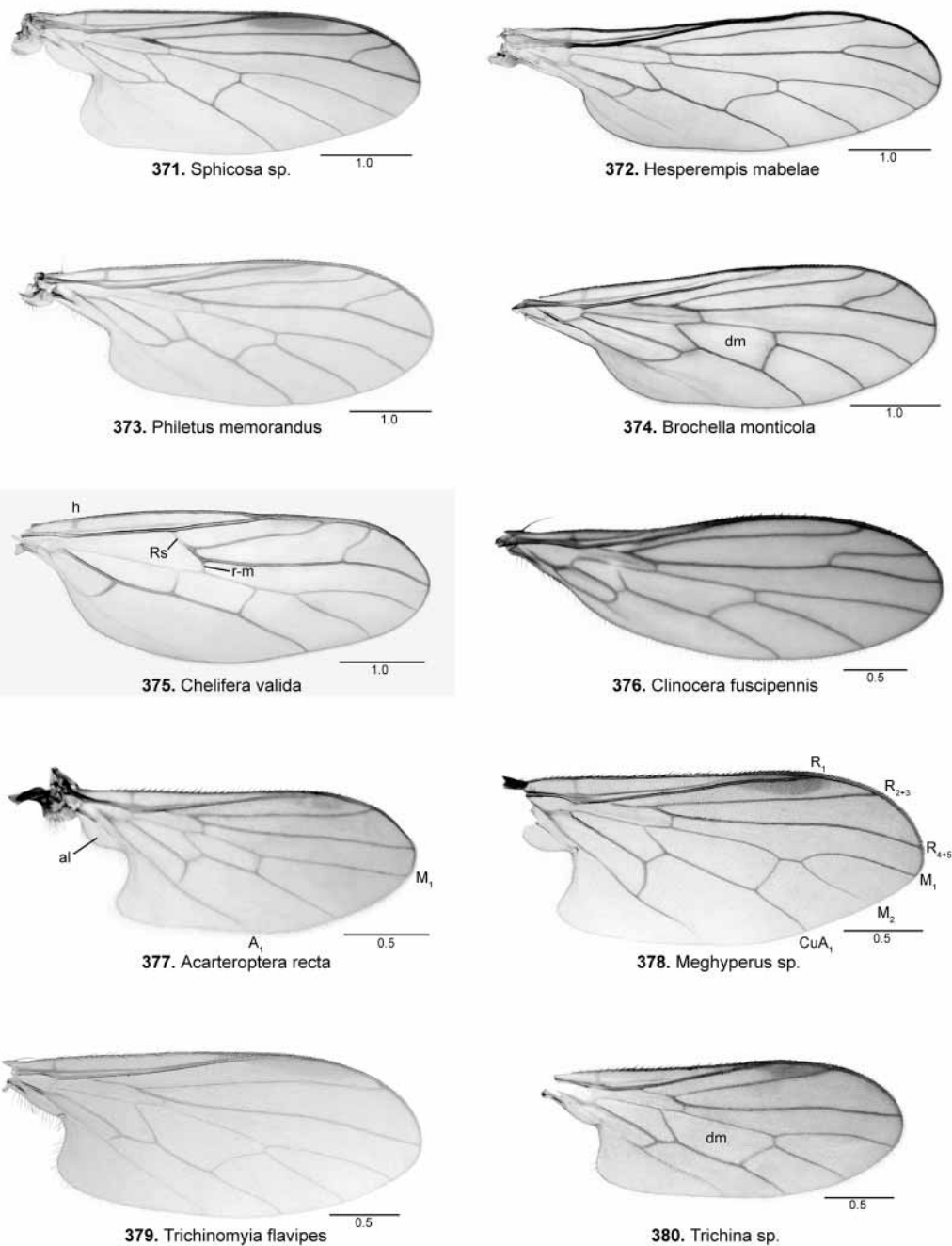


**FIGURES 355–360.** Male terminalia of Cyclorrhapha. **355.** Opetiidae, *Opetia anomalipennis* Saigusa, lateral view. **356.** Platypezidae, *Microsania* sp., lateral view. **357.** Platypezidae, *Agathomyia* sp., lateral view. **358–359.** Lonchopteridae, *Lonchoptera uniseta* Curran: **358.** epandrium and proctiger, lateral view. **359.** hypandrium and phallus, lateral view. **360.** Sciadoceridae, *Sciadocera rufomaculata* White, right lateral view. Abbreviations: bac scl—bacilliform sclerite, cerc—cercus, ej apod—ejaculatory apodeme, epand—epandrium, hypd—hypandrium, hypd proc—hypandrial process, hyprct—hypoproct, lft sur—left surstylus, pgt—postgonite, phapod—phallapodeme, ph—phallus, rt sur—right surstylus, sp—spiracle 6 and 7, spm sac—sperm sac, st—sternite 8, sur—surstylus, tg—tergite 7 and 8. Scale in mm.

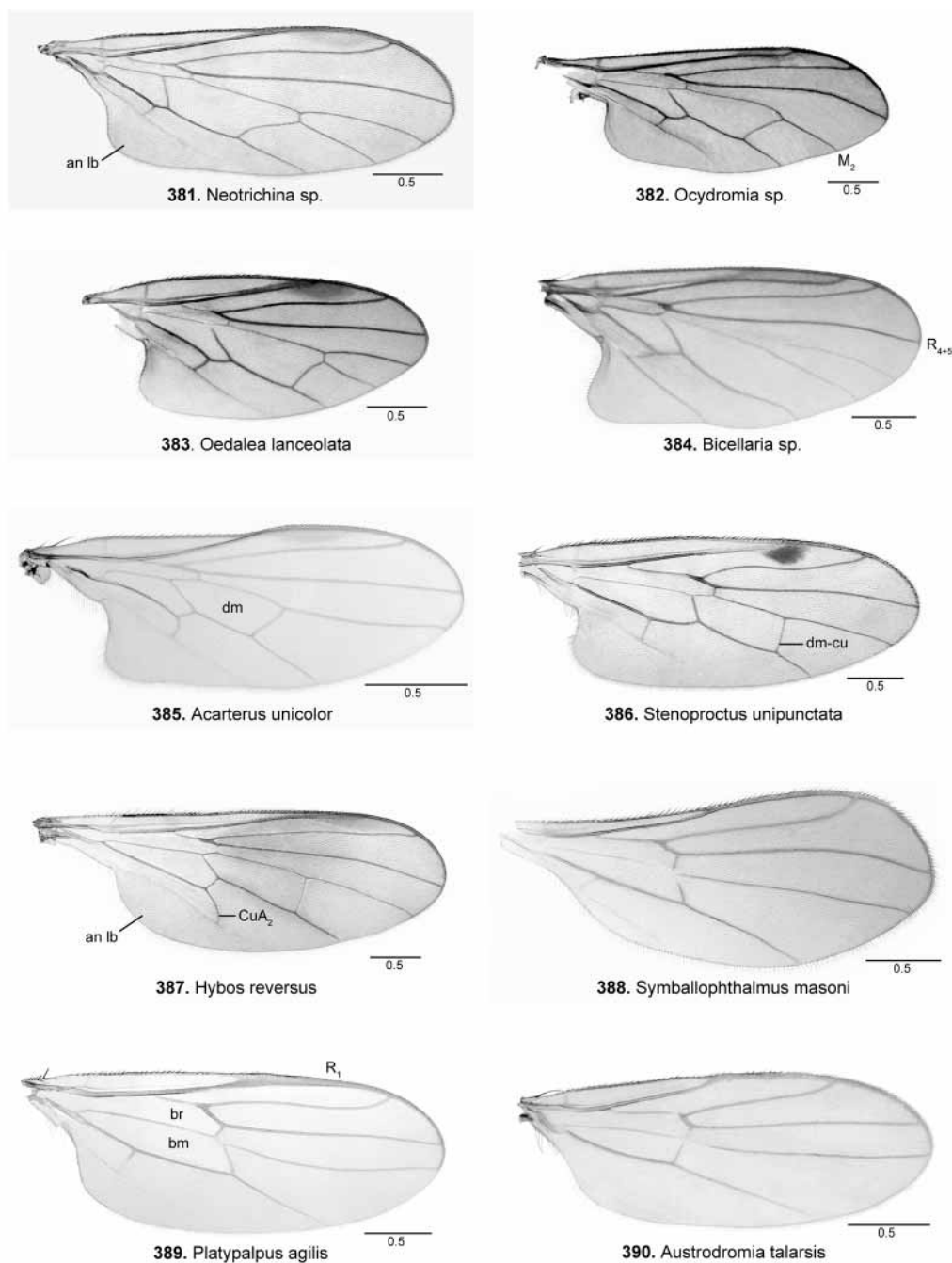




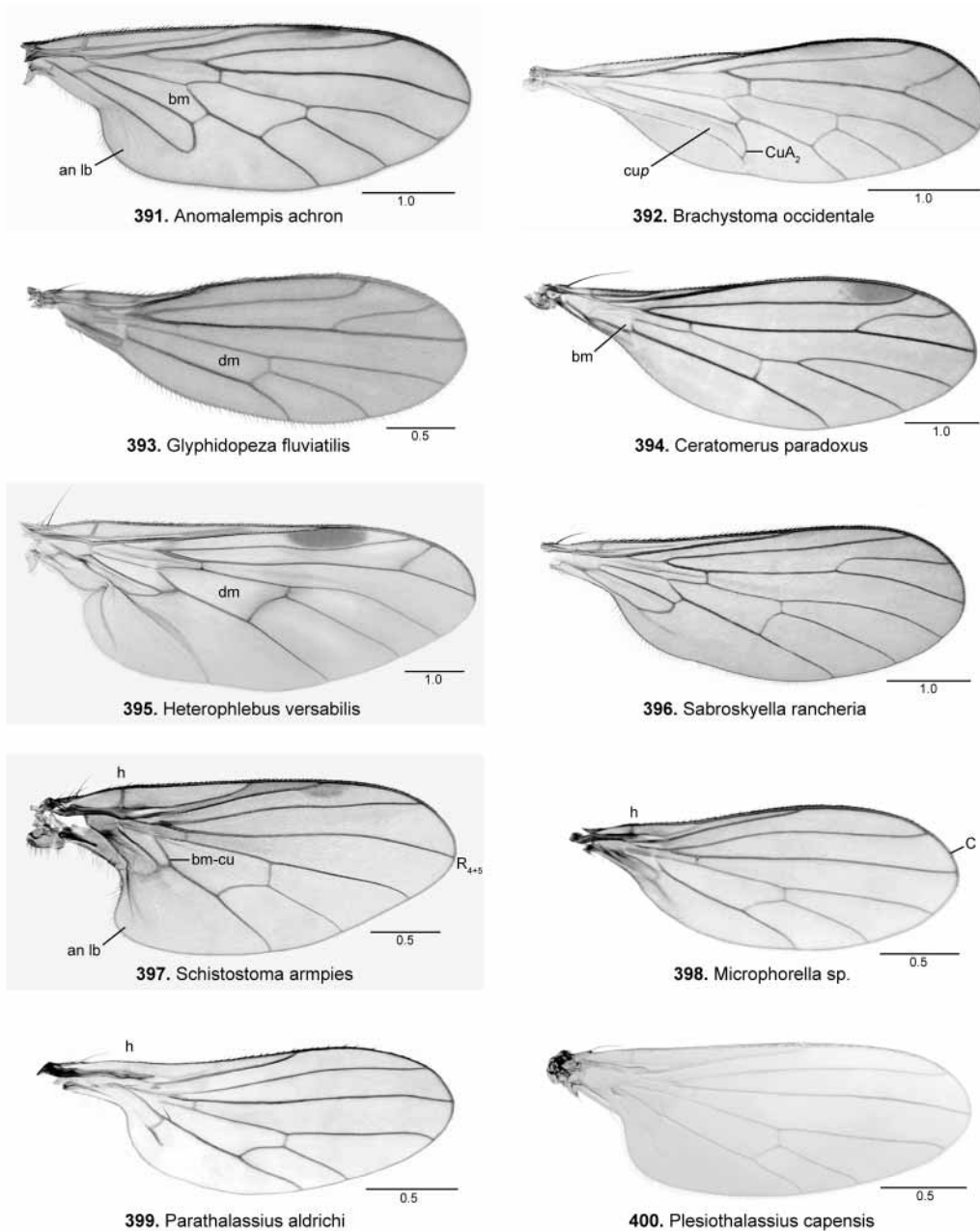
**FIGURES 361–370.** Wings of Asiloidea and Empidoidea. **361.** Therevidae, *Thereva duplicis* Coquillett. **362.** Hilarimorphidae, *Hilarimorpha* sp. **363.** Empidoidea, *Iteaphila nitidula* Zetterstedt. **364.** Empidoidea, *Homalocnemis adelensis* (Miller). **365.** Empidoidea, *Oreogeton heterogamus* Melander. **366.** Empidoidea, *Hormopeza senator* Melander. **367.** Empidoidea, *Ragas unica* Walker. **368.** Empidoidea, *Hilara maura* (Fab.). **369.** Empidoidea, *Hilarempis facilis* Collin. **370.** Empidoidea, *Empidadelpha propria* Collin. Abbreviations:  $A_1$ —anal vein, an lb—anal lobe, bm—basal medial cell,  $CuA_1$ —1<sup>st</sup> anterior branch of cubital vein,  $CuA_2$ —2<sup>nd</sup> anterior branch of cubital vein, cup—posterior cubital (= anal) cell, dm—discal medial cell, h—humeral crossvein,  $M_1$ —1<sup>st</sup> medial vein,  $M_2$ —2<sup>nd</sup> medial vein,  $R_1$ —1<sup>st</sup> radial vein,  $R_{2+3}$ —2<sup>nd</sup> + 3<sup>rd</sup> radial vein,  $R_4$ —4<sup>th</sup> radial vein,  $R_5$ —5<sup>th</sup> radial vein, Sc—subcostal vein. Scale in mm.



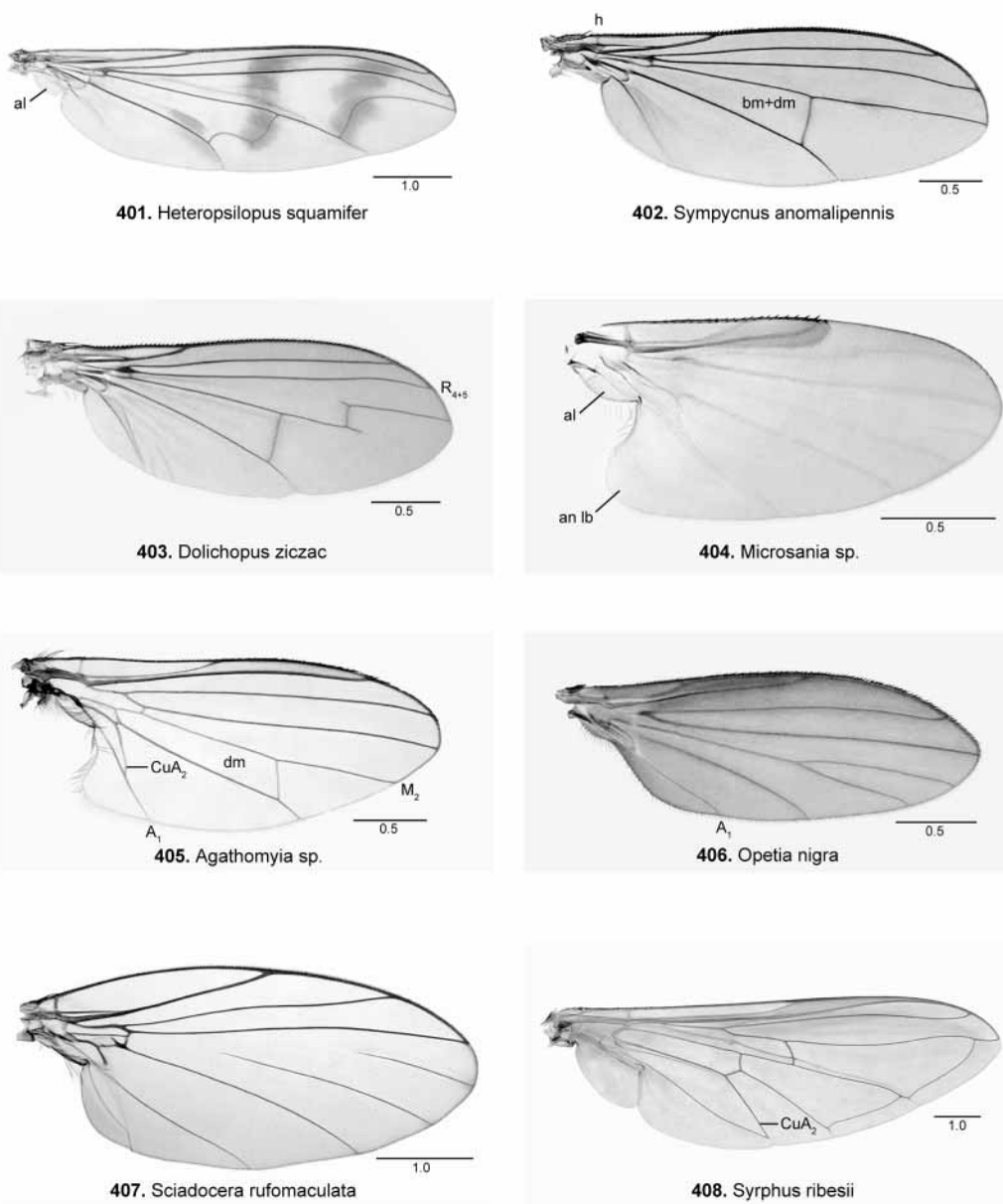
**FIGURES 371– 380.** Wings of Empidoidea. **371.** *Sphicosa* sp. **372.** *Hesperempis mabelae* Melander. **373.** *Philetus memorandum* Melander. **374.** *Brochella monticola* Melander. **375.** *Chelifera valida* Loew. **376.** *Clinocera fuscipennis* Loew. **377.** *Acarteroptera recta* Collin. **378.** *Meghyperus* sp. **379.** *Trichinomyia flavipes* (Zetterstedt). **380.** *Trichina* sp. Abbreviations: A<sub>1</sub>—anal vein, al—alula, CuA<sub>1</sub>—1<sup>st</sup> anterior branch of cubital vein, dm—discal medial cell, h—humeral crossvein, M<sub>1</sub>—1<sup>st</sup> medial vein, M<sub>2</sub>—2<sup>nd</sup> medial vein, R<sub>1</sub>—1<sup>st</sup> radial vein, R<sub>2+3</sub>—2<sup>nd</sup> + 3<sup>rd</sup> radial vein, R<sub>4+5</sub>—4<sup>th</sup> + 5<sup>th</sup> radial vein, r-m—radial-medial crossvein, Rs—radial sector. Scale in mm.



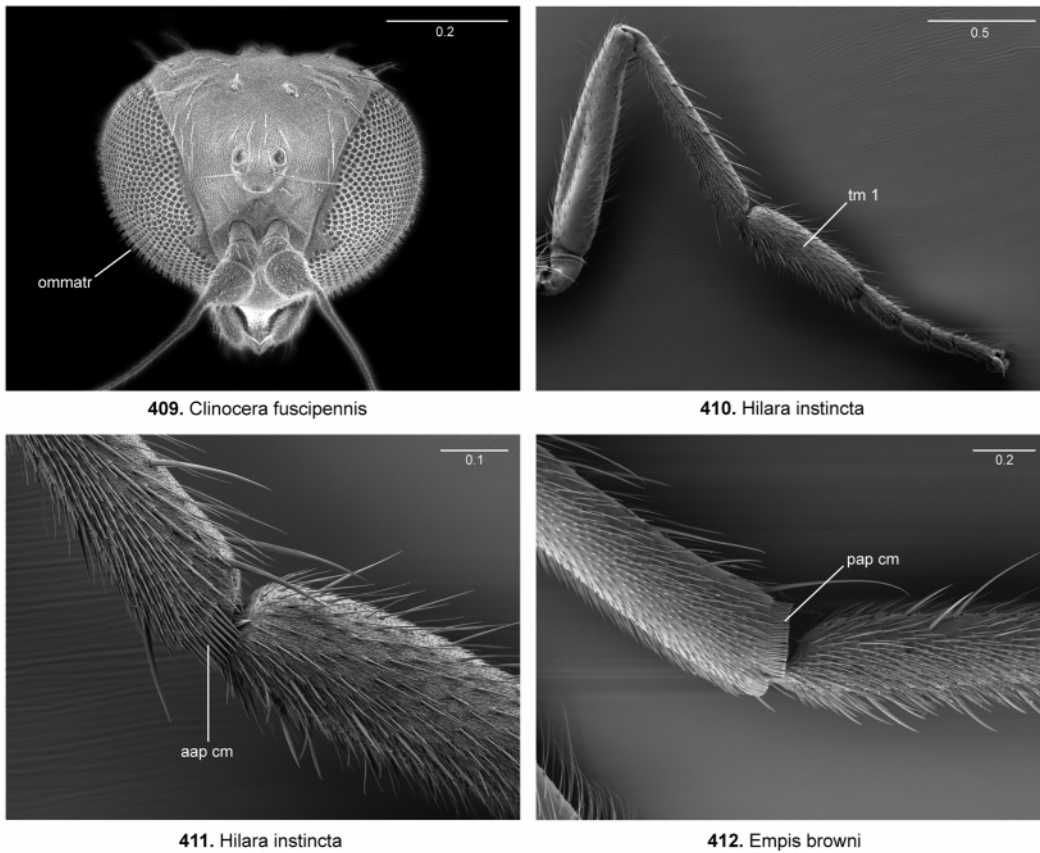
**FIGURES 381–390.** Wings of Empidoidea. **381.** *Neotrichina* sp. **382.** *Ocydromia* sp. **383.** *Oedalea lanceolata* Melander. **384.** *Bicellaria* sp. **385.** *Acarterus unicolor* Loew. **386.** *Stenoproctus unipunctatus* Loew. **387.** *Hybos reversus* Walker. **388.** *Symballophthalmus masoni* Chillcott. **389.** *Platypalpus agilis* (Meigen). **390.** *Austrodromia talarsis* Collin. Abbreviations: an lb—anal lobe, bm—basal medial cell, br—basal radial cell, CuA<sub>2</sub>—2<sup>nd</sup> anterior branch of cubital vein, dm—discal medial cell, dm-cu—discal medial-cubital crossvein, M<sub>2</sub>—2<sup>nd</sup> medial vein, R<sub>1</sub>—1<sup>st</sup> radial vein, R<sub>4+5</sub>—4<sup>th</sup> + 5<sup>th</sup> radial vein. Scale in mm.



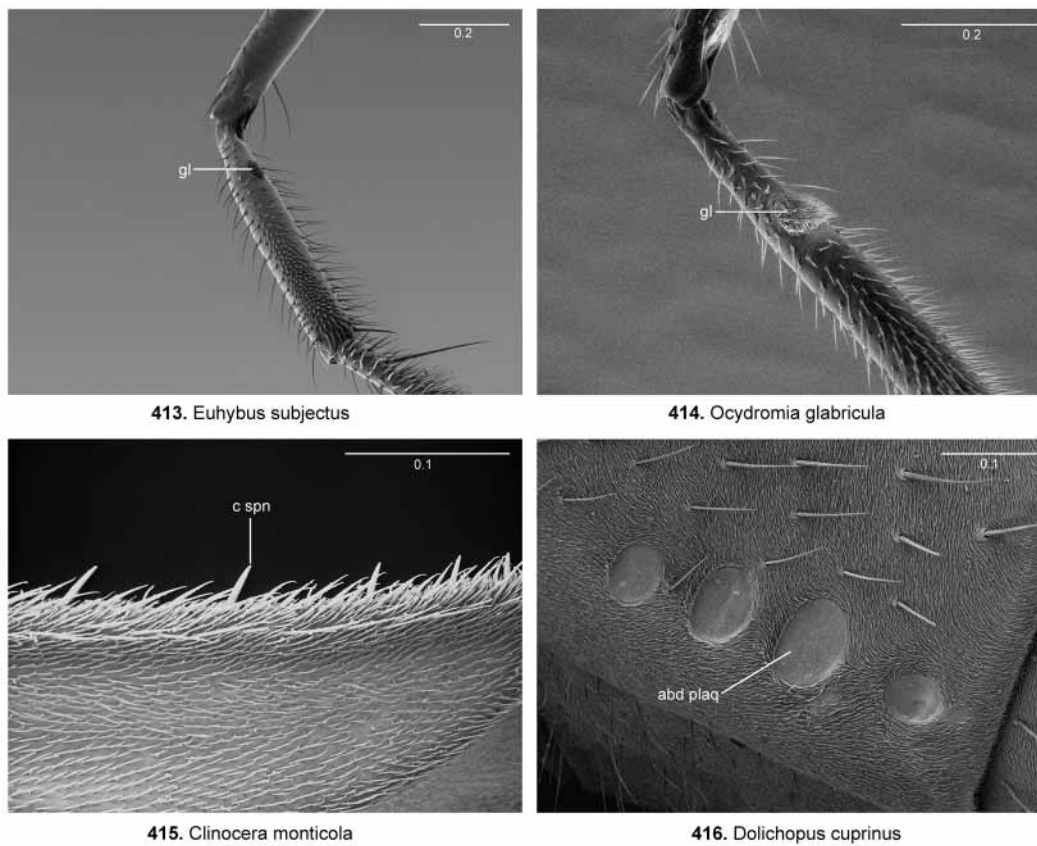
**FIGURES 391–400.** Wings of Empidoidea. **391.** *Anomalempis archon* Melander. **392.** *Brachystoma occidentale* Melander. **393.** *Glyphidopeza fluviatilis* Sinclair. **394.** *Ceratomerus paradoxus* Philippi. **395.** *Heterophlebus versabilis* (Collin). **396.** *Sabroskyella rancheria* Wilder. **397.** *Schistostoma armipes* (Melander). **398.** *Microphorella* sp. **399.** *Parathalassius aldrichi* Melander. **400.** *Plesiothalassius capensis* (Smith). Abbreviations: an lb—anal lobe, bm—basal medial cell, bm-cu—basal medial-cubital crossvein, C—costal vein, CuA<sub>2</sub>—2<sup>nd</sup> anterior branch of cubital vein, cup—posterior cubital (= anal) cell, dm—discal medial cell, h—humeral crossvein, R<sub>4+5</sub>—4<sup>th</sup> + 5<sup>th</sup> radial vein. Scale in mm.



**FIGURES 401–408.** Wings of Empidoidea and Cyclorrhapha. **401.** Empidoidea, *Heteropsilopus squamifer* Hardy. **402.** Empidoidea, *Sympycnus anomalipennis* Becker. **403.** Empidoidea, *Dolichopus ziczac* Wiedemann group. **404.** Platypezidae, *Microsania* sp. **405.** Platypezidae, *Agathomyia* sp. **406.** Opetiidae, *Opetia nigra* Meigen. **407.** Sciadoceridae, *Sciadocera rufomaculata* White. **408.** Syrphidae, *Syrphus ribesii* (L.). Abbreviations: A<sub>1</sub>—anal vein, al—alula, an lb—anal lobe, bm+dm—fused basal medial and discal medial cell, CuA<sub>2</sub>—2<sup>nd</sup> anterior branch of cubital vein, dm—discal medial cell, h—humeral crossvein, M<sub>2</sub>—2<sup>nd</sup> medial vein, R<sub>4+5</sub>—4<sup>th</sup> + 5<sup>th</sup> radial vein. Scale in mm.

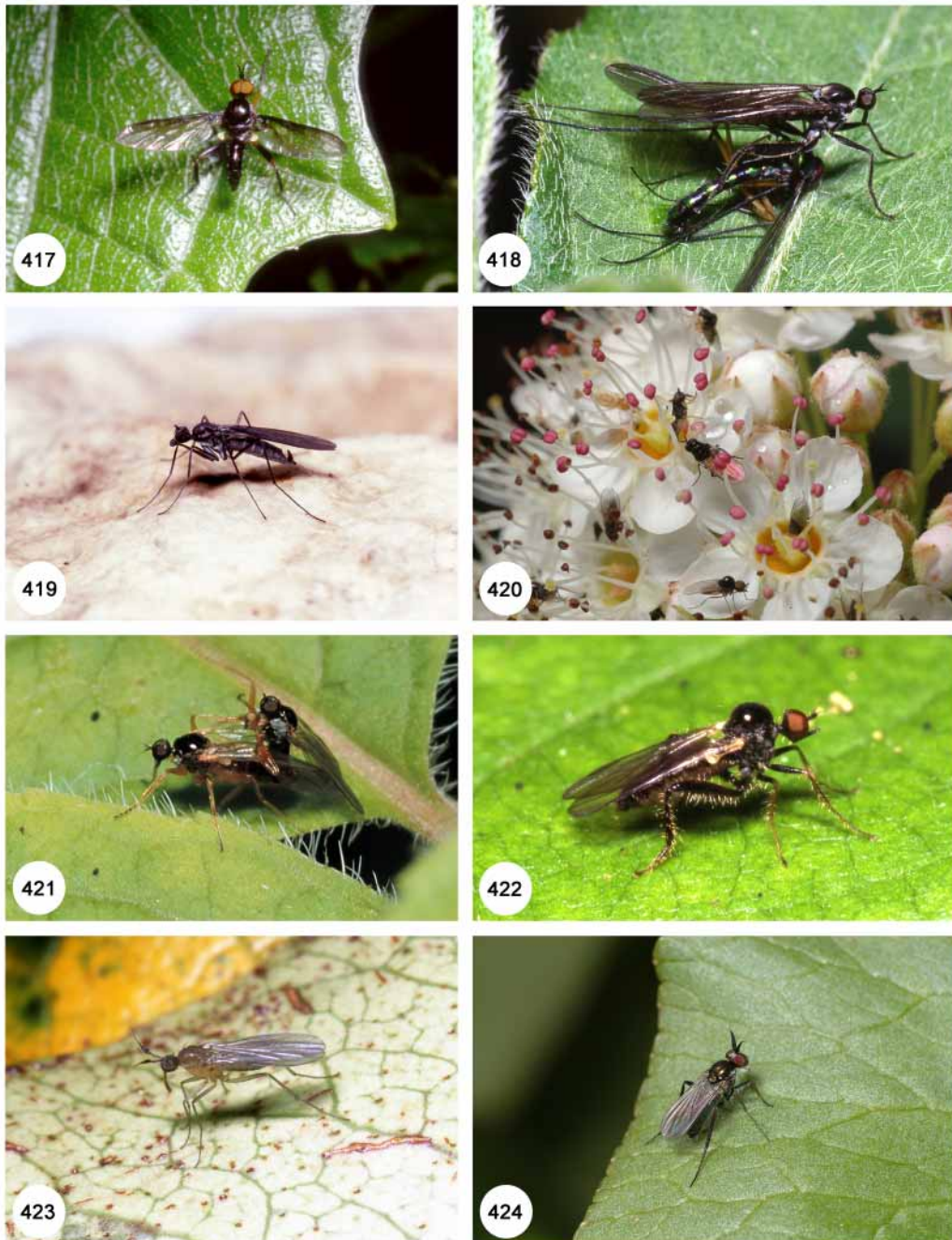


**FIGURES 409–412.** Head and thoracic structures of Empidoidea. **409.** *Clinocera fuscipennis* Loew, head, frontal view. **410.** *Hilara interstincta* (Fallén), foreleg. **411.** *Hilara interstincta* (Fallén), apex of fore tibia and first tarsomere. **412.** *Empis browni* Curran, apex of hind tibia and first tarsomere. Abbreviations: aap cm—anteroapical comb, ommatr—ommatrichia, pap cm—posteroapical comb, tm 1—first tarsomere. Scale in mm.



**FIGURES 413–416.** Thoracic and abdominal structures of Empidoidea. **413.** *Euhybus subjectus* (Walker), fore tibia. **414.** *Ocydromia glabricula* (Fallén), base of fore tibia. **415.** *Clinocera monticola* Sinclair, costal margin of wing. **416.** *Dolichopus cuprinus* Wiedemann, lateral margin of tergite 2. Abbreviations: abd plaq—abdominal plaque, c spn—costal spine, gl—gland. Scale in mm.





**FIGURES 417–424.** Photographs of species of Empidoidea taken by S.A. Marshall. **417.** Empididae, *Empis* sp.; Costa Rica. **418.** Empididae, *Aplomera* sp., with dolichopodid prey; Ecuador. **419.** Empididae, *Clinocera fuscipennis* Loew; Canada. **420.** Hybotidae, *Anthalia* sp., on flowers of *Physocarpus opulifolius* (L.); Canada. **421.** Hybotidae, *Platypalpus* sp. nr. *bicornis* Melander, copulating pair; Canada. **422.** Hybotidae, *Hybos reversus* Walker; Canada. **423.** Brachystomatidae, *Ceratomerus* sp.; New Zealand. **424.** Dolichopodidae, *Rhaphium* sp.; Canada.