

South European spiders from the Duffey collection in the Manchester Museum (Arachnida: Araneae)

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1 **South European spiders from the Duffey collection in the Manchester Museum**
2 **(Arachnida: Araneae)**

3

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5

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8

9 **Short title:** South European spiders

10

11 **Abstract**

12 Eric Duffey's spider collection in the Manchester Museum, accumulated over more than 40
13 years, contains more than 300 samples from a diverse range of biotopes in most South
14 European countries. Most of this material was previously unsorted. It has now been sorted
15 and identified to species level. It contains more than 2500 specimens of more than 500
16 species in 240 genera and 42 families. The collection details of all of these samples are listed
17 here, and a number of selected specimens are illustrated.

18

19 **Introduction**

20 The spider collection donated by Eric Duffey to the Manchester Museum (Logunov 2011,
21 Breitling 2018) contained 9 jars and one box of mostly undetermined and unsorted spiders
22 predominantly from southern Europe. The earliest sample, from Tour du Valat in the
23 Camargue (France), is dated 21 April 1956, and Duffey's collecting activities continued until
24 at least 15 May 2003, when he was beating spiders from the south boundary hedge of his
25 estate Chez Gouillard in Haute-Vienne (France). In between, samples were obtained (mostly
26 by hand collecting, but also by pitfall traps, leaf litter extraction and other methods), from a
27 wide range of habitats from Portugal and Spain (mostly the area around Huesca in the central
28 Pyrenees) to north-east Greece and Cyprus. All this material, from more than 120 distinct
29 locations in 12 countries, has now been sorted and has yielded about 1300 records based on
30 more than 2500 specimens of more than 500 species in 240 genera and 42 families.

31

32 **Material and Methods**

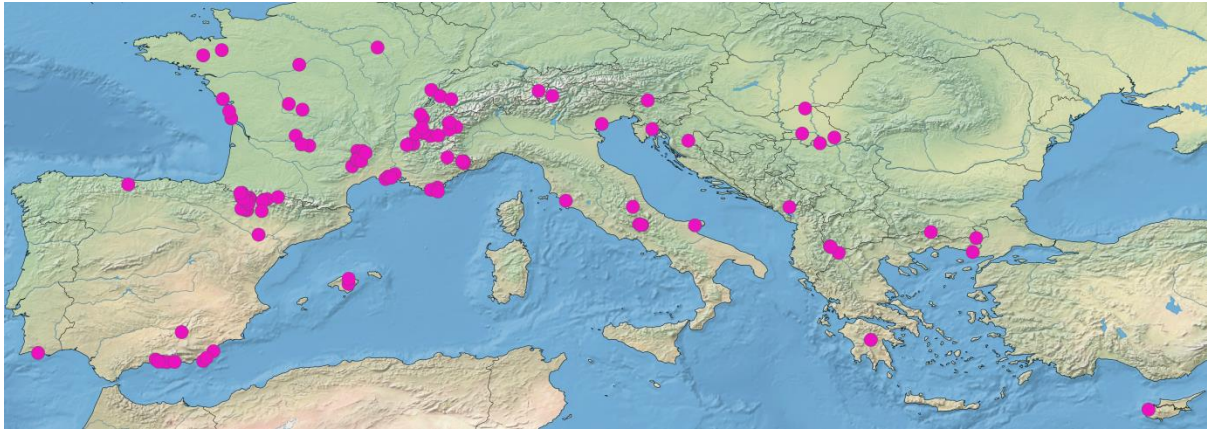
33 Specimens were sorted under a Cambridge Instruments Z45E stereo microscope
34 (magnification up to 45×). The methods for examining the material changed during the
35 course of the study. Initially, dissection of the material was largely avoided, to minimize
36 damage to potentially precious museum material. Later, when it was realized that unidentified
37 material would probably be of little value for future research, genitalia were more regularly
38 dissected and examined under a Leitz (Wetzlar) HM-LUX compound microscope at
39 magnifications up to 400×. Sometimes genitalia were cleared by overnight incubation in
40 lactic acid or 10% KOH, but preferentially they were examined directly in methyl salicylate
41 (wintergreen oil). At lower magnifications, male pedipalps were positioned for examination
42 using a layer of KY jelly under 70% ethanol, but at higher magnifications in most cases the
43 default positions achieved by placing the pedipalp (dissected at the coxa–trochanter joint)
44 under a cover slip was sufficient for identification. In a few cases, genitalia were stained by
45 brief treatment with 1% Chlorazol Black in 70% ethanol to emphasize transparent
46 membranous structures. Specimens were identified where possible using the resources of the
47 Spiders of Europe website (<https://www.araneae.nmbe.ch>) and the photo galleries of Pierre
48 Oger (<https://arachno.piwigo.com>) and the Wiki of the German Arachnological Society
49 (<https://wiki.arages.de>; Lemke et al. 2014). Potential new country records were identified by
50 reference to the Spiders of Europe website (version 03.2019) and the updated checklist of
51 Iberian spiders (Branco et al. 2019), but no efforts were made to identify additional published
52 or unpublished records missing in the database. Sketches of the genitalia are provided for
53 selected specimens, to illustrate the diversity of species collected by Dr. Duffey, to allow
54 verification of difficult cases, and to stimulate other researchers to study Duffey’s material
55 and correct the proposed identifications where necessary. All specimens are deposited in the
56 collection of the Manchester Museum. Nomenclature follows the World Spider Catalog
57 (Version 19.5).

58

59 **List of samples and locations**

60 Sampling locations were identified using Google Maps, as well as a diverse range of online
61 hiking guides and tourist information websites for some of the more obscure place names.
62 Coordinates are only approximate, as none of the labels contained actual coordinate
63 information. Habitat information and other details follow the original label information as
64 closely as possible; only the spelling of place names has been slightly unified, and
65 abbreviations have been expanded where possible. An overview of the geographical scope of
66 this part of the Duffey collection is shown in **Figure 1**.

67



68
69 **Figure 1.** Overview of the South European sampling locations represented in the previously
70 unidentified material of the Duffey collection in the Manchester Museum.

71

72

73 **Croatia**

- 74 1.— Lovran Istra. 45.296, 14.270
75 23/Jun/1983. Found crawling on Rita's arm.
76 2.— Plitvice Lakes National Park. 44.871, 15.598
77 21/Jun/1983. Collected on rocky walls by lower lakes in National Park.

78

79 **Cyprus**

- 80 3.— between Ayia and Lysos. 34.998, 32.506
81 04/Apr/1990. On orchid floret by roadside.

82

83 **France**

- 84 4.— Madone de Fenestre, Mercantour National Park, Alpes-Maritimes. 44.097, 7.356
85 4a.— 14/Sep/1975. 2200 m. Araneus on web in *Rhododendron* bush. Erigonine under
86 stone in rocky area.
87 4b.— 14/Sep/1975. 2200 m. On webs on rocks. A common spider in this area.
88 5.— Between Bonneval-sur-Arc and L'Écot, Vanoise National Park, Savoie. 45.375, 7.072
89 15/Aug/1975. In vegetated scree. Under stones and in grass tussocks. 1800 m.
90 6.— Between La Grave & Pic de l'Homme, Écrins National Park, Haute-Alpes. 45.046,
91 6.127
92 11/Aug/1975. 1800 m. In wet moss of mountain spring.
93 7.— Camargue Nature Reserve, Saintes-Maries-de-la-Mer, Bouches-du-Rhône. 43.465, 4.47
94 7a.— 06/May/1975. Saltmarsh on wet mud and in water under *Halimione* and
95 *Suaeda*.
96 7b.— 08/May/1975. Collected in shrubby *Salicornia*, grass, *Juncus* and litter on
97 saltmarsh and margin of sandy islands. Petit Bois des Rièges.
98 8.— Camargue, Bouches-du-Rhône. 43.557, 4.569
99 12-18/2/1962. In *Juncus* and grass in *Suaeda* and *Salicornia* marsh of brackish water.
100 9.— Campsite St. Clair, Le Lavandou, Var. 43.147, 6.38
101 08/Sep/1975. On van.

- 102 10.— Caston [=Castillon-la-Bataille? Not clear which place is meant].
 103 12/Jun/2001. In doorway.
- 104 11.— Causse de Changeège, Mende, Lozère . 44.502, 3.438
 105 25/May/1975. Under stones in very short vegetation. Scattered bushes.
- 106 12.— Causse du Larzac, Aveyron. 43.936, 3.243
 107 12a.— 16/May/1975. In box and under stones in short grass.
 108 12b.— 05/Aug/1975. On flower head and on webs in bushes.
 109 12c.— 13/May/1975. Under stones and in *Brachypodium pinnatum* between rocks
 110 where ground still moist. Nîmes-le-Vieux.
 111 12d.— 13/May/1975. Under stones and running on grass. A few (male *Dipoenia*) in
 112 *Brachypodium*. West of Nîmes-le-Vieux.
 113 12e.— 17/May/1975. In grassland of 15 cm height. West-facing rocky slope. Above
 114 Meyrueis.
- 115 13.— Chavigny [not clear which of the places of this name is meant].
 116 25/Jan/1983. Crawling on roadside parking.
- 117 14.— Chez Gouillard, Haute-Vienne. 46.222, 0.918
 118 14a.— 14-21/04/2000. Pitfalls near lodge.
 119 14b.— 02/May/2001. Beaten from hedges on east side of étang.
 120 14c.— 02/May/2001. Swept from grass, black knapweed and low *Juncus* in field
 121 where orchids occur.
 122 14d.— 17/May/2001. Beaten from mistletoe on old apple tree and from a few metres
 123 of nearby hedge.
 124 14e.— 5-9/04/2002. 6 pitfalls, humid grass between path and mown edge of étang.
 125 14f.— 20/Apr/2002. Beaten from hawthorn, blackthorn, honeysuckle, bramble, holly,
 126 oak in hedgerow. Sunny day.
 127 14g.— 30/May/2002. Beating hedge.
 128 14h.— 30/May/2002. Sweeping damp grassland.
 129 14i.— 31/May/2002. Beaten from hedge, west and north boundary.
 130 14j.— 18/Apr/2003. Collected from hedgerow.
 131 14k.— 18/Apr/2003. Swept from grass and *Juncus* in fields.
 132 14l.— 15/May/2003. Beaten from south boundary hedge of Chez Gouillard, but from
 133 Hugenott side.
- 134 15.— Cirque d'Archiane, Drôme. 44.751, 5.498
 135 03/May/1975. In beech litter in open mixed woodland at about 1000 m altitude.
- 136 16.— Cirque de Gavarnie, Hautes-Pyrénées. 42.7, -0.007
 137 02/Aug/1975. Under stones at about 1500 m within Cirque. Stoney slope, west side,
 138 spiny fescue turf.
- 139 17.— Cirque de Troumouse, Hautes-Pyrénées. 42.723, 0.118
 140 17a.— 03/Aug/1975. On stony ground by edge of snowbed. Lac des Aires.
 141 17b.— 03/Aug/1975. Under stones and in wet grass and moss by spring.
- 142 18.— Col de la Cayolle, Alpes Maritimes. 44.259, 6.744
 143 04/Aug/1982. 2300 m alt. Under stones in snow and in wet area with *Alchemilla*
 144 *alpina*.
- 145 19.— Col de Loubière, Mont Lozère, Cévennes National Park, Lozère . 44.496, 3.629

- 146 24/May/1975. Under stones on grass. In open grass area in spruce forest, 1150 m.
147 20.— Col du Chat, Chambéry, Savoie. 45.693, 5.847
148 26/Apr/1975. leaf litter and moss at about 800 m in hazel, oak, beech coppice.
149 21.— Col du Galibier, Hautes-Alpes. 45.064, 6.408
150 21a.— 13/Aug/1975. 2650 m. Under stones by edge of snow bed. Some still
151 embedded in snow.
152 21b.— 05/Sep/1975. 2556 m. Collected under stones of snow bed where we collected
153 in mid-August. All snow now gone.
154 21c.— 05/Sep/1975. 2556m. Collected under stones (near extinct snow bed).
155 22.— Côte Sauvage, Charente-Maritime. 45.692, -1.197
156 22a.— 28/May/1966. Pointe de la Coubre. Dunes by edge of pine forest.
157 22b.— 29/May/1966. Forest ride near road. Running on sandy, sparsely vegetated
158 area.
159 22c.— 29/May/1966. Near Ronces les Baines. Dunes by forest edge. In pine needles
160 and under plants.
161 22d.— 30/May/1966. Open forest scrub. Mainly swept.
162 22e.— 01/Jun/1966. Bonne Anse dunes, near Le Coubre. Mainly under “rock rose”.
163 22f.— 01/Jun/1966. Bonne Anse dunes. From mainly grass and *Artemisia campestris*.
164 23.— Forêt de Montal, Cévennes National Park, Lozère. 44.162, 3.407
165 21/May/1975. In wet litter of *Molinia* and grass in open spring-fed area in
166 spruce/pine, oak.
167 24.— Forêt de Rennes, Ille-et-Vilaine. 48.197, -1.546
168 06/May/1979. Under stone by oldest beech tree in forest.
169 25.— Forêt du Prince, Jura. 46.736, 6.154
170 17/Jun/1989. On field layer plant in forest ride, mainly fir, some beech.
171 26.— Galoubet, Lot. 44.687, 1.669
172 13/Jun/2001. Swept from hay field and hedge.
173 27.— Gordolasque Valley, Mercantour National Park, Alpes-Maritimes. 44.044, 7.356
174 27a.— 15/Sep/1975. End of road at 1820 m. Shaken from grass and litter on slopes
175 above river. Rita C. Duffey coll.
176 27b.— 15/Sep/1975. End of road at 1820 m. Vegetated scree. Under stones, well
177 below surface stones. *Segestria* and two with stripey abdomens were under surface
178 stones in vegetated area.
179 28.— Île d'Oléron, Côte Sauvage, Charente-Maritime. 45.955, -1.274
180 28a.— 31/May/1966. Dunes a few km north of Le Château. In grass and other herbs,
181 some swept.
182 28b.— 31/May/1966. Dunes des Saumonards, Plage de Plaisance. Running on path
183 through dunes.
184 29.— La Crau near St. Martin-de-Crau, Bouches-du-Rhône. 43.638, 4.812
185 10/May/1975. Under stones and in sparse vegetation.
186 30.— La Pinède, Die, Drôme. 44.757, 5.354
187 09/Jun/1989. On camping car, evening.
188 31.— Lac de Trécolpas, Mercantour National Park, Alpes-Maritimes. 44.116, 7.34
189 13/Sep/1975. 2150 m. Under stones and in grass litter. Alpine grassland around lake.

- 190 32.— Lascaux II, Dordogne. 45.054, 1.168
 191 30/May/1989. In van, parking area in forest.
- 192 33.— Le Boréon, Mercantour National Park, Alpes-Maritimes. 44.114, 7.285
 193 13/Sep/1975. 1600 m. Larch forest. Open area of vegetated scree. Under stones in
 194 *Vaccinium myrtillus*, grass, Sedum, Theridiid in *Rhododendron ferrugineum*.
- 195 34.— Les Lanches, Valley of Peisey-Nancroix, Vanoise National Park, Savoie. 45.525, 6.791
 196 20/Aug/1975. Under stones by melting snow and by small spring.
- 197 35.— Les Salins, Hyères, Var. 43.067, 6.137
 198 12/Apr/1975. In Agropyron sp. Old salin. Wet ground.
- 199 36.— Les Seiglières, Forêt domaniale de Saint-Martin d’Uriage, Isère. 45.156, 5.869
 200 23/Apr/1975. 1065 m. In moss on pine trunk in spruce forest. Smallest was an
 201 astronaut on self while on road.
- 202 37.— Longeville-sur-Mer, Vendée. 46.402, -1.509
 203 09/Jun/1964. Consolidated dunes. On blue flower like scabious.
- 204 38.— Marais de Lavours, Ain. 45.832, 5.759
 205 26/Apr/1975. Reed, big sedge, *Caltha*, meadowsweet. Ground wet. Burnt stem
 206 stumps.
- 207 39.— Meyrueis, Cévennes National Park, Lozère. 44.18, 3.429
 208 39a.— 14/May/1975. 1200 m altitude. Open beech forest in leaf litter on rocky slope.
 209 2 km south-east Meyrueis Valley, River La Brèze.
 210 39b.— “May 1975”. Miscellaneous catch. In caravan or wash place.
 211 39c.— 18/May/1975. Grass and leaf litter under oak scrub and *Cytisus purgens*. West-
 212 facing slope, River La Brèze, 2 km south-east Meyruies.
- 213 40.— Mont Aigoual, Cévennes National Park, Gard. 44.121, 3.574
 214 40a.— 14/May/1975. 1000 m alt. In grass and litter under vegetation of *Genista*
 215 *purgans*.
 216 40b.— 20/May/1975. Under stones and in *Nardus* sward. All dry apart from 2
 217 *Lepthyphantes* from damp area. 1500 m altitude.
- 218 41.— Mont Lozère, west of Génolhac, and in area of Belvédère des Bouzèdes, Cévennes
 219 National Park, Gard/Lozère.
 220 09/Aug/1975. Pine litter in *Vaccinium myrtillus* at 1507 m and beech/pine litter in
 221 *Deschampsia flexuosa* at about 1100 m. *Zora* and jumpers from 2nd site, apart from 1
 222 small dark.
- 223 42.— near Bettu [?].
 224 27/May/2005. Swept from roadside vegetation.
- 225 43.— Near Termignon, Vanoise National Park, Savoie. 45.277, 6.814
 226 14/Aug/1975. Running on stony path. 1700 m. Collected during climb to Lac Blanc
 227 de Termignon from Le Villard.
- 228 44.— Parc Naturel Régional d’Armorique, Finistère. 48.294, 4.178
 229 05/Jul/1979. Running on wet sphagnum. Several seen.
- 230 45.— Parc Naturel Régional du Vercors, Drôme. 45.129, 5.587
 231 45a.— 13/Jun/1989. 1400 m, running on bare earth in area of patchy vegetation.
 232 Vallée de Combeau.
 233 45b.— 14/Jun/1989. In crevice on van, origin?

- 234 45c.— 14/Jun/1989. On rock, 1600 m.
- 235 46.— Pic de Finiels, Mont Lozère, Cévennes National Park, Lozère . 44.426, 3.739
- 236 22/May/1975. 1700 m, under stones and in heather. Mostly *Nardus/Vaccinium*.
- 237 47.— Port Cros, Hyères, Var. 43.004, 6.395
- 238 47a.— 13/Apr/1975. Segestria in tree crevice, other with two egg sacs in rock crevice.
- 239 47b.— 13/Apr/1975. Under stones by path. Maquis vegetation with few trees. East of
- 240 Fort de l'Estissac.
- 241 47c.— 14/Apr/1975. Leaf litter of Holm oak and Aleppo pine forest.
- 242 47d.— 17/Apr/1975. In needle leaf litter under large Aleppo pines on steep slope. Le
- 243 Tuf, half-way down zigzag path.
- 244 47e.— 17/Apr/1975. Running in moist meadow by Bay, lightly grazed by two
- 245 donkeys. Grass height 15 cm.
- 246 47f.— 17/Apr/1975. Under isolated plant of *Limonium minutum* on sandstone cliff. Le
- 247 Tuf.
- 248 47g.— 17/Apr/1975. under piece of driftwood at head of beach. Baie de Port Man.
- 249 47h.— 18/Apr/1975. In leaf litter under Holm oak, *Erica arborea*, *Arbutus*, Aleppo
- 250 pine. Slightly moist at 2–3 cm depth (Theridiid on tree foliage).
- 251 47i.— 18/Apr/1975. In thick pine needle leaf litter Aleppo pine. *Erica arborea* and
- 252 *Arbutus*. On way from Baie de Port Man.
- 253 47j.— 18/Apr/1975. Salticid female caught eating moth on foliage of *Erica arborea* 5
- 254 ft. height.
- 255 48.— Réserve Naturelle de la Tourbière des Dauges, Haute-Vienne. 46.012, 1.419
- 256 29/Sep/2001. Sorted from bag of moss from bog.
- 257 49.— Saint-Clair, Le Lavandou, Var. 43.147, 6.38
- 258 14/Apr/1975. On caravan.
- 259 50.— Saint-Pierre-de-Chartreuse, Isère. 45.342, 5.815
- 260 22/Apr/1975. alt. 900 m.
- 261 51.— Southwest of Gourdon, Lot. 44.737, 1.382
- 262 12/Jun/2001. Swept from grasses and shrubs on roadside verge.
- 263 52.— Station biologique de Paimpont, Paimpont, Ille-et-Vilaine. 48.004, -2.229
- 264 52a.— 02/Jul/1979. Two aeronauts by field station. One large agelenid in cell under
- 265 stone and others swept from *Agrostis setacea* and *Erica cinerea* on heath burnt a few
- 266 years ago.
- 267 52b.— 07/Jul/1979. Bathroom.
- 268 52c.— 07/Jul/1979. Marsh by lake, sphagnum marshes, vegetation and around
- 269 tussocks. Very wet.
- 270 53.— Tour du Valat, Camargue, Bouches-du-Rhône. 43.512, 4.666
- 271 21/Apr/1956. [no further data provided]
- 272 54.— Vallée de la Grand-Pierre, Blois, Loir-et-Cher. 47.664, 1.299
- 273 10/Jul/1979. Swept from limestone grassland, low bushes of oak, sloe, juniper and
- 274 box.
- 275 55.— Valley of Peisey Nancroix at Lac des Moutons, Vanoise National Park, Savoie. 45.545,
- 276 6.833

277 19/Aug/1975. All erigonines under stones at 2500–2600 m. Others taken on path
278 below 2000 m.

279 56.— Vercheny, Drôme. 44.716, 5.252

280 01/May/1975. Under stone on hillside with open scrub and fine scree. Stones among
281 leaf litter.

282

283 **Greece**

284 57.— [unspecified localities].

285 “June 1983”. Collections from campsite loos and in and on van.

286 58.— Evros Delta, Thrace. 40.782, 26.047

287 58a.— 30-31/05-1/6/1983. Caught on van. Evros Marches and on Alexandroupoli.

288 58b.— 31/05/-1/06/1983. Under *Halimione* and *Salicornia* on dry edge of saltmarsh.

289 59.— Half-way between Protokklision and Mikron Derion, Thrace. 41.298, 26.178

290 03/Jun/1983. Collected from grassy vegetation with many plants by roadside.

291 60.— Mount Mainalo, Falanthos, Arcadia. 37.557, 22.306

292 13/Jun/1983. At about 1000 m.

293 61.— Prespa National Park, Mikri Prespa Lake, Macedonia. 40.753, 21.122

294 16/Jun/1983. Collected under rosettes of *Verbascum* on sand bar.

295 62.— Rhodopi Forest Reserve, Eastern Macedonia. 41.518, 24.511

296 26-27/05/1983. 1800–1950 m. Collected on ground by paths and in grassy clearings.

297

298 **Italy**

299 63.— Camosciara, Abruzzo National Park, L'Aquila. 41.78, 13.906

300 63a.— 30/Sep/1978. In leaf litter of closed canopy beech wood at 1800 m on steep
301 slope.

302 63b.— 30/Sep/1978. In wet moss on rocks by cascade at 1900 m. Open rocky area in
303 beech forest.

304 64.— Campo Imperatore, Gran Sasso e Monti della Laga National Park, L'Aquila. 42.443,
305 13.558

306 07/Oct/1978. 1550 m. Near Gran Sasso under stones in rocky area scanty vegetation.

307 65.— Foresta Umbra, Gargano, Foggia. 41.764, 15.84

308 05/Oct/1978. *Quercus cerris* leaf litter, mixed with *Quercus ilex*. In closed canopy
309 woodland.

310 66.— Isola di Burano, Venice, Venice. 45.486, 12.417

311 15/Oct/1978. Dunes. In leaf litter under bushes and in lichen and moss. Many
312 immatures discarded.

313 67.— Maremma Regional Park, Grosseto, Toscana. 42.666, 11.099

314 18/Oct/1978. Under stones in brackish meadow near coast.

315 68.— Pineta, Pescasseroli, L'Aquila. 41.808, 13.788

316 03/Sep/1976. 1220 m, rocky substrate, northeast exposure.

317 69.— Solda Valley, Stelvio National Park, Trentino. 46.516, 10.597

318 21/Sep/1978. 1920 m. Under stones on flat plain of *Dryas* heath. Formed by outwash
319 from mountains.

320 70.— Val Fondillo, Abruzzo National Park, L'Aquila. 41.779, 13.856

- 321 31/Dec/1975. In beech leaf litter in open woodland.
 322
 323 **Macedonia**
 324 71.— Gradište campsite, Peštani, Ohrid. 40.996, 20.799
 325 20/May/1983. Swept from herbs and bushes, very small spider was under stone.
 326 72.— National Park Galičica, Trpejca, Ohrid. 40.968, 20.837
 327 22/May/1983. 1600m. Swept & collected on ground. Road.
 328
 329 **Montenegro**
 330 73.— Podgorica (Titograd). 42.434, 19.314
 331 18/Jun/1983. Rocky slopes with scrub and scattered plants.
 332
 333 **Portugal**
 334 74.— Algarve. 37.079, -8.296
 335 Spring 1980. On shrub. Died 10.10.1980.
 336
 337 **Serbia**
 338 75.— Belgrade. 44.779, 20.434
 339 15/May/1983. In van on campsite northwest side of city.
 340 76.— Near Devojački Bunar, Deliblatska Peščara Special Nature Reserve. 44.988, 20.963
 341 16/May/1983. Swept from dry grassland.
 342 77.— Near Male Pijace, Subotica. 46.055, 19.889
 343 14/May/1983. Dry steppe grassland.
 344 78.— Near Vrdnik, Fruška Gora National Park . 45.132, 19.779
 345 15/May/1983. On dry grassland. Swept.
 346
 347 **Slovenia**
 348 79.— Triglav National Park. 46.353, 14.107
 349 12/Sep/1980. 1100 m altitude on plateau north of National Park. Under bark in *Picea*
 350 forest.
 351
 352 **Spain**
 353 80.— 1700m above Puento del Ruso, Somport, Huesca. 42.774, -0.519
 354 02/Jun/1973. On grass or in *Vaccinium* of *Pinus uncinata* forest.
 355 81.— 20 km east of Nerja, Málaga. 36.758, -3.715
 356 17/Mar/1979. Under stones in garigue vegetation on hillside near coast.
 357 82.— About 1 km northeast of lighthouse and 15 km southwest of Almería. 36.781, -2.23
 358 22/Mar/1979. Saltmarsh, under fronds of shrubby *Salicornia*.
 359 83.— Ansó Valley, Huesca. 42.784, -0.828
 360 83a.— 04/Jun/1973. In moss & leaf litter, beech wood four km north of village.
 361 83b.— 04/Jun/1973. Under stones and in leaf litter just north of village.
 362 83b.— 04/Jun/1973. Under stones in leaf litter under beech just north of village.
 363 83c.— 05/Jun/1973. Taxeres. Mostly under rotten wood. Trunks of beech and under
 364 bark. A few running or under stones..

- 365 83d.— 05/Jun/1973. Taxeres. Rotten wood, under bark etc. in beech. A few taken
366 running and under stones.
- 367 83e.— 06/Jun/1973. Between Ansó and Valle de Roncal. At highest point. Remainder
368 of collection from lichen on scots pine.
- 369 83f.— 06/Jun/1973. Highest point between Ansó and Valle de Roncal. Shaken from
370 moss around scots pine.
- 371 83g.— 10/Jun/1973. Under stones and in beech leaf litter.
- 372 83h.— 21/Sep/1974. General beating.
- 373 83i.— 21/Sep/1974. Under stones in beech litter on valley side. Leptoneta site.
- 374 83j.— 23/Sep/1974. Dry Barranci. Under stones.
- 375 84.— Barranco de Agüerri, Huesca. 42.792, -0.695
376 30/May/1973. Under stones of erosion slope. South side of river.
- 377 85.— Belagua, Huesca. 42.957, -0.802
378 29/May/1977. Vacuumed from dry grassland.
- 379 86.— Between Puerto de Motril and Solbreña, Granada. 36.739, -3.556
380 18/Mar/1979. Collected under stones, driftwood, rubbish etc. at head of beach.
- 381 87.— Castillo de Loarre, Huesca. 42.326, -0.612
382 26/May/1977. Vacuumed from dry grassland.
- 383 88.— Ena-Ordaniso, Huesca. 42.448, -0.694
384 88a.— 27/Jun/1972. On ground in herbaceous vegetation and under stones amongst
385 small pine trees.
- 386 88b.— 24/Sep/1974. Grassland with pine near the road barrier. In grass and leaf litter.
- 387 88c.— 24/Sep/1974. In grass, pine needles, under wood, leaf litter. In open pine with
388 grass near road barrier. Rita C. Duffey coll.
- 389 88d.— 24/Sep/1974. In leaf litter and among wood fragments beyond road barrier.
390 p.m.
- 391 88e.— 24/Sep/1974. In leaf litter and grass near barrier - mostly beyond it. p.m. Rita
392 C. Duffey coll.
- 393 88f.— 24/Sep/1974. Just before barrier. Spiders from D-vac. collection of grassland
394 and herbs among pine trees.
- 395 88g.— 25/May/1977. Vacuumed dry grassland.
- 396 89.— Hills around Laguna Ercina, Covadonga National Park, Asturias. 43.267, -4.981
397 18/Jul/1975. Under stones and around tussocks of vegetation.
- 398 90.— Hills near Frigiliana, Nerja, Málaga. 36.792, -3.892
399 90a.— 19/Mar/1979. Under stones in garigue (burnt 3 years ago). On bushes (large
400 spiders).
- 401 90b.— 21/Mar/1979. In sheltered valley well vegetated with shrub. Under stones in
402 patches of scree in macquis.
- 403 91.— Jaca, Huesca. 42.564, -0.572
404 91a.— “June 1972”. [no further data provided]
405 91b.— 20/Jun/1972. Camping Victoria. Swept from tall herbs.
406 91c.— 20/Jun/1972. Camping Victoria. Taken on building of camp site.
407 91d.— 23/Jun/1972. In pine/holly leaf litter.
408 91e.— “1973”. [no further data provided].

- 409 92.— La Mamola, Granada. 36.747, -3.277
410 22/Mar/1979. Under stones, around rosette plants and the *Araneus* on web in rock
411 cliff. All by coast.
- 412 93.— Laguna La Playa, Bujaraloz, Zaragoza, Spain. 41.42, -0.194
413 93a.— 11/Jul/1975. Dry inland salt area in leaf litter under shrubby *Salicornia* etc.
414 93b.— 11/Jul/1975. Immatures. In leaf litter and shaken from shrubby *Salicornia* &
415 *Artemisia* on dried out inland saltmarsh.
416 93c.— 11/Jul/1975. In dry leaf litter under shrubby *Salicornia*, on bed of dry salt lake.
- 417 94.— Las Blancas, Huesca. 42.715, -0.564
418 01/Jul/1972. Under stones at 2000m. Alpine tundra.
- 419 95.— Las Tiasas Bajas, Huesca. 42.609, -0.660
420 27/May/1973. Running on dry stone shingle banks by Rio Estarrún.
- 421 96.— Linza, Huesca. 42.898, -0.800
422 96a.— 03/Jul/1972. In beech leaf litter near head of valley.
423 96b.— 05/Jun/1973. Leaf litter, beech wood.
424 96c.— 23/Sep/1974. In grass on side of small valley.
425 96d.— 24/May/1977. Vacuumed from dry grassland.
426 96e.— 28/May/1977. Vacuumed from dry grassland.
- 427 97.— Loarre, Huesca. 42.314, -0.626
428 97a.— 30/Jun/1972. Grubbing in grass and moss under pine and box.
429 97b.— 30/Jun/1972. Swept from tall herbs, grass and low bushes by box/pine wood.
430 97c.— 19/Sep/1974. In moss & leaf litter under box & pine.
431 97d.— 19/Sep/1974. In moss and leaf litter under box and pine (same as 1972 site).
432 97e.— 19/Sep/1974. Under stone on hillside with box.
- 433 98.— Los Lecherines, Huesca. 42.744, -0.539
434 20/May/1977. Vacuumed from dry grassland.
- 435 99.— Mallos de Riglos, Huesca. 42.351, -0.724
436 29/Sep/1974. About 800m. Under stones in *Schoenus* and *Juncus* area.
- 437 100.— Mallos de Riglos, Huesca. 42.351, -0.724
438 30/Sep/1974. On rock. Fed in lab throughout October at Monks Wood. Found dead 31
439 October. Still immature.
- 440 101.— Mojácar, Almería. 37.141, -1.85
441 01/Feb/1983. Catch from 4 pitfalls put out on hillside behind campsite.
- 442 102.— Molino de Aratores, Huesca. 42.655, -0.556
443 20/Sep/1974. Thin layer of wet moss over mud in *Juncus*. Rita C. Duffey coll.
- 444 103.— Monte El Boalar, Huesca. 42.558, -0.636
445 103a.— 24/Jun/1972. In leaf litter under willow by Rio Aragón.
446 103b.— 24/Jun/1972. In leaf litter under willow by Rio Aragón.
447 103c.— 24/Jun/1972. Swept from vegetation on shingle by Rio Aragón.
448 103d.— 24/May/1973. Running on shingle by stream.
449 103e.— 27/May/1973. Beaten from foliage of oak, hawthorn, juniper, box,
450 honeysuckle and other shrubs.
451 103e2.— 27/May/1973. Beaten from oak, hawthorn, juniper, box, honeysuckle and
452 other shrubs in woodland.

453 103f.— 27/May/1973. Swept from grass and flowering herbs in strip of meadow just
 454 below wood.
 455 103g.— 27/May/1973. Swept from hawthorn blossom.
 456 103h.— 24/Jun/1974. Swept from vegetation on shingle by Rio Aragón.
 457 103i.— 16/Sep/1974. Beaten from oak.
 458 103j.— 16/Sep/1974. Collected from wet leaf litter and grass under oak. 1 hour. Rita
 459 C. Duffey, coll. Raining during collecting.
 460 103k.— 16/Sep/1974. Collected from wet leaf litter and grass under oak. Raining
 461 during collecting. 1 hour.
 462 103l.— 16/Sep/1974. Shingle bed of Rio Aragón. Around plants and shrubs litter.
 463 Rita C. Duffey, coll.
 464 103m.— 16/Sep/1974. Shingle bed of Rio Aragón. On plants and in leaf litter around
 465 base of plants and willow shrub.
 466 103n.— 25/Sep/1974. Collected from bag of moss and leaf litter taken from under
 467 box and oak .
 468 103o.— 25/Sep/1974. Grubbed from grassland in open area of woodland.
 469 103p.— 25/Sep/1974. Immatures from leaf litter and moss and from grass litter. Open
 470 deciduous woodland.
 471 103q.— 25/Sep/1974. Swept and grubbed in grassland in box and oak. Immatures.
 472 103r.— 28/Sep/1974. From leaf litter and moss under box, pine and oak..
 473 103s.— 18/May/1977. Vacuumed from dry grassland.
 474 104.— Near Cómputa, Nerja, Málaga. 36.835, -3.972
 475 25/Mar/1979. Stony steep hillside, with olives and scattered scrubs. Very little
 476 herbaceous vegetation.
 477 105.— Near Níjar, Almería. 36.895, -2.107
 478 04/Feb/1983. In short grass on stoney hillside.
 479 106.— near Petra, Mallorca. 39.613, 3.113
 480 17/Apr/1991. Under clod of earth in abandoned agricultural land.
 481 107.— Nerja, Málaga. 36.758, -3.871
 482 107a.— 26/Mar/1979. In hills at back of town. Under stones, shrubs and grass
 483 tussocks. Stony hillside with *Cistus* and rosemary, few herbs present.
 484 107b.— 29/Mar/1979. In low hills at back of town. Macquis vegetation but very green
 485 because of recent rain. Under stones.
 486 108.— North of Aragüès, Huesca. 42.729, -0.678
 487 03/Jun/1973. 1400m, swept and beaten in open woodland where road ends. Lycosids
 488 on ground.
 489 109.— Ordesa National Park, Huesca. 42.656, -0.049
 490 27/Sep/1974. Pine leaf litter.
 491 110.— Ordesa National Park, Huesca. 42.656, -0.049
 492 110a.— 27/Sep/1974. Shaken from beech leaf litter in shade.
 493 110b.— 09/Jul/1975. 2000 m. North-facing side of valley. Under stones and in
 494 ungrazed alpine meadow with cranesbill, cornflower, *Gentiana lutea*, *Trollius*. Dry.
 495 111.— Puente del Ruso, Huesca. 42.798, 0.521
 496 22/May/1977. Vacuumed from dry grassland.

- 497 112.— Riglos, Huesca. 42.348, -0.725
498 29/Sep/1974. Swept from roadside shrubs. Rosemary, oak (with holly-like leaves) and
499 indetermined shrub with red berries.
- 500 113.— Rodellar, gorge of Rio Mascún, Huesca. 42.290, -0.080
501 113a.— 08/Jun/1973. In moss, under stones, swept.
502 113b.— 08/Jun/1973. Shaken from moss.
503 113c.— 08/Jun/1973. Swept and beaten and on ground.
504 113d.— 08/Jun/1973. Swept, beaten, on ground and shaken from moss.
505 113e.— 08/Jun/1973. Swept, beaten, under stones.
- 506 114.— S'Albufera Natural Park, Mallorca. 39.802, 3.117
507 20/Apr/1991. Taken on reed heads or swept from low reed.
- 508 115.— San Felices, Huesca. 42.375, -0.827
509 115a.— 07/Jun/1973. Sweeping and beating along road from Agüero to San Felices.
510 115b.— 07/Jun/1973. Under stones in moist conifer leaf litter. *Theridion* on web on
511 conifer.
- 512 116.— San Juan de la Peña, Huesca. 42.566, -0.561
513 116a.— 23/Jun/1972. Leaf litter in holly/pine wood.
514 116b.— 24/Jun/1972. Running on short open turf.
515 116c.— 26/Jun/1972. At monastery.
516 116d.— 26/Jun/1972. Meteorological station. In open grassy area with pine trees.
517 116e.— 26/Jun/1972. Meteorological station. Swept from grassy area with flowers.
518 116f.— 25/May/1973. On and in lichen on scots pine.
519 116g.— 25/May/1973. Running on & under stones at the Solana.
520 116h.— 25/May/1973. Running on ground in pine, beech, *Abies*, holly, box
521 woodland.
522 116i.— 25/May/1973. Shaken from moss around base of pine trees in mixed forest.
523 116j.— 26/May/1973. Beaten from beech.
524 116k.— 26/May/1973. Collected from short wet vegetation around pond at
525 monastery.
526 116l.— 26/May/1973. Swept from buxus.
527 116m.— 26/May/1973. Swept from foliage of pine, box, juniper, beech and *Abies*.
528 116n.— 12/Sep/1974. Grubbing in wet vegetation and litter around pond by
529 monastery. 1 hour. Rita C. Duffey, coll.
- 530 116o.— 30/May/1977. Vacuumed from dry grassland. Estación Meteorológica.
531 116p.— 26/Jun/1977. Running in grassy area amongst pines. Estación Meteorológica.
- 532 117.— Selva de Oza, Huesca. 42.834, -0.711
533 117a.— 18/Sep/1974. About 1200m. Wet grass, sedges and mosses by side of small
534 stream, down grassy hillside. 1 hour.
535 117b.— 18/Sep/1974. About 1200m. Wet grass, sedges and mosses growing by side
536 of small stream down grassy mountainside. About 1 hour. Rita C. Duffey, coll.
- 537 117.— Selva de Oza, Huesca. 42.834, -0.711
538 117c.— 18/Sep/1974. Casual under stones and in rotting wood of old beech trees.
- 539 118.— Sierra de Cazorla, Jaén. 37.841, -3.021
540 “May 1986”. [no further data provided]

- 541 119.— Sierra Nevada, Granada. 37.841, -3.021
542 27/Mar/1979. 1700-2200 m. Under stones by roadside and on hillside on road to
543 Parador de Sierra Nevada.
- 544 120.— Sinués, Huesca. 42.654, -0.649
545 120a.— 22/Jun/1972. In pine wood.
546 120b.— 26/Jun/1972. Under stone in vegetated bottom of river bed.
547 120c.— 17/Sep/1974. Adults from grass litter and from under stones in grass. Edge of
548 river bed of Río Estarrún below road.
549 120d.— 17/Sep/1974. Grass tussocks on sand and shingle surrounded by bushes. Río
550 Estarrún.
551 120e.— 17/Sep/1974. In grass tussocks on sand and shingle near bushes. Río
552 Estarrún.
553 120f.— 17/Sep/1974. In grass tussocks on sand and shingle. Río Estarrún.
- 554 121.— Valle de Hecho. 42.737, -0.749
555 121a.— 18/Sep/1974. Sorted from back of leaf litter from box and beech. Hillside
556 with mixed forest between Hecho and Selva de Oza..
557 121b.— 28/May/1973. Between Hecho and Selva de Oza. Beaten from foliage of
558 beech, pine, *Abies*, box, juniper & other shrubs.
559 121c.— 28/May/1973. Between Hecho and Selva de Oza. Beech litter.
560 121d.— 28/May/1973. Between Hecho and Selva de Oza. Swept from foliage of
561 beech, pine, *Abies*, box, juniper and other shrubs.
562 121e.— 29/May/1973. Alpine pastures of Guarrinza, under stones at about 1450m.
563 121f.— 29/May/1973. Collected under stones at about 1600m, in region of Guarrinza
564 by entrance of small valley with tourbière.
565 121g.— 29/May/1973. Guarrinza, 1400m. Under stones and running on grass on
566 alpine meadows.
567 121h.— 29/May/1973. Near Guarrinza, collected from wet vegetation in spring on
568 hillside.
569 121i.— 29/May/1973. Near the Col of Anzotiello, 1600m. Under stones on alpine
570 pastures.
571 121j.— 29/May/1973. Under stones and running on grass. 1400m. Alpine pastures in
572 region of Guarrinza.
573 121k.— 30/May/1973. Calzada Romana. Swept, beaten, under stones and running.
574 121l.— 30/May/1973. In soaking wet moss on stones of mountain torrent.
575 121m.— 30/May/1973. Loo at campsite.
576 121n.— 30/May/1973. swept and beaten from bushes and field layer.
577 121o.— 31/May/1973. Under stones on grassy hillside.
578 121p.— 21/May/1977. Vacuumed from dry grassland.
- 579 122.— Venta de Arraco, Navarra. 42.947, -0.868
580 122a.— “June 1972”. [no further data provided]
581 122b.— 28/Jun/1972. In beech leaf litter.
582 122c.— 21/Sep/1974. 1600-1700m. Under stones and in *Festuca scoparia* grass.
583 122d.— 21/Sep/1974. Spiny *Festuca* cut from around rocks. Open *Pinus uncinata*
584 forest.

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Switzerland

- 123.— Campsite, Morges, Vaud. 46.504, 6.489
31/Aug/1975. Aeronauts.
124.— Gros Brassat, Vaud. 46.395, 6.884
02/Sep/1975. Wet marsh litter, but mostly from sandy beach and grass tussocks.
125.— near Zernez, Graubünden. 46.701, 10.095
29/Jun/1983. On hillside, found on leaf of *Alchemilla* species.

Species list with annotations

Agelenidae

- 596 *Allagelena gracilens* (C. L. Koch, 1841) 103m (1♀)
597 *Coelotes atropos* (Walckenaer, 1830) 34 (2♀)
598 *Coelotes poweri* Simon, 1875 31 (1♀)
599 *Coelotes terrestris* (Wider, 1834) 24 (1♀)
600 *Eratigena bucculenta* (L. Koch, 1868) s. lat. (morph C) 88d (1♀) **Figure 2A**
601 This specimen is clearly distinct from *E. bucculenta* as illustrated by Machado (1941),
602 Brignoli (1978) and Bolzern et al. (2013); most importantly, the copulatory ducts are
603 considerably longer. However, this is in good agreement with the females illustrated by
604 Bolzern et al. as *E. bucculenta* s. lat. (morph C; e.g., Bolzern et al. 2013:fig. 11P). Of course,
605 the question whether this form is an independent species can not be answered based on this
606 single specimen, but the discrete variation seems to exceed what would typically be expected
607 for conspecific material.
608
609 *Eratigena feminea* (Simon, 1870) 119 (1♂) **Figure 2B**
610 *Eratigena fuesslini* (Pavesi, 1873) 83b (1♀ 1 juv.), 83c (1♀), 83d (1♀), 121f (1♀), 121g
611 (1♀), 121k (1♀ 1♂) **Figure 2C, D**
612 *Lycosoides coarctata* (Dufour, 1831) 81 (1♀), 90b (1♀)
613 *Malthonica lusitanica* Simon, 1898 83b (2♀), 83f (4♀), 83g (6♀), 88b (1♀), 91d (10♀ 3
614 juv.), 97d (1♀ 1♂), 103k (1♀ 1♂), 103n (3♀), 103r (3♀ 2♂) **Figure 2E** (Breitling
615 2018:figure 2L)
616 *Pireneitega segestriformis* (Dufour, 1820) 83i (1♀) **Figure 2F**
617 *Textrix caudata* L. Koch, 1872 119 (1♀)
618 *Textrix denticulata* (Olivier, 1789) 83d (1♀ 2 juv.)
619
620 **Amaurobiidae**
621 *Amaurobius erberi* (Keyserling, 1863) 47c (1♀), 47g (1♀), 47i (1♀)
622
623 **Anyphaenidae**
624 *Anyphaena accentuata* (Walckenaer, 1802) 14f (1♂), 14g (2♀ 1♂), 14i (1♀), 103e (1♀),
625 121b (1♀ 1 juv.)
626 *Anyphaena sabina* L. Koch, 1866 47h (2 juv.), 71 (1♀), 103f (1♀) **Figure 3**

- 627
- 628 **Araneidae**
- 629 *Aculepeira carbonaria* (L. Koch, 1869) 4b (2♀)
- 630 *Agalenatea redii* (Scopoli, 1763) 12a (1♂), 14c (2♀), 14k (1♀ 1♂), 39b (1♀), 113c (1♀)
- 631 *Araneus quadratus* Clerck, 1757 4a (1♀), 12b (1♂), 55 (1♂) **Figure 4A**
- 632 *Araneus sturmi* (Hahn, 1831) 116k (1♂) **Figure 4B**
- 633 *Araneus triguttatus*(Fabricius, 1775) 103e (2♀)
- 634 *Araniella alpica* (L. Koch, 1869) 25 (1♀ 1♂)
- 635 *Araniella cucurbitina* (Clerck, 1757) 2 (1♂), 22d (2♂), 108 (1♀), 115a (1♂)
- 636 *Araniella inconspicua* (Simon, 1874) 103e2 (1♀)
- 637 *Araniella opisthographa* (Kulczyński, 1905) 14i (2♀ 1♂), 14l (2♂), 62 (1♀)
- 638 *Cercidia prominens* (Westring, 1851) 12e (1♀)
- 639 *Cyclosa algerica* Simon, 1885 12b (1♀), 89 (2♀) **Figure 5A, B**
- 640 *Cyclosa conica* (Pallas, 1772) 108 (1♂), 113c (1♀), 121k (1♀ 1♂) **Figure 4C, 5C**
- 641 *Gibbaranea bituberculata* (Walckenaer, 1802) 116j (1♀)
- 642 *Gibbaranea gibbosa* (Walckenaer, 1802) 14d (1♀ 1♂), 14l (1♂), 71 (1♂), 121k (1♂)
- 643 **Figure 4D, E**
- 644 *Hypsosinga albovittata* (Westring, 1851) 54 (2♀), 121p (4 juv.)
- 645 *Hypsosinga heri* (Hahn, 1831) 54 (1♀)
- 646 *Hypsosinga pygmaea* (Sundevall, 1831) 14k (1♂)
- 647 *Hypsosinga sanguinea* (C. L. Koch, 1844) 54 (1♀), 103s (1♂), 116o (1♀), 121k (1♂), 121n (1♀) **Figure 4F**
- 649 *Larinioides cornutus* (Clerck, 1757) 14c (1♂), 14h (1♂), 14k (1♂)
- 650 *Larinioides suspicax* (O. P.-Cambridge, 1876) 8 (1♀), 114 (1♂) (Breitling
- 651 2018:figure 2G)
- 652 *Leviellus kochi* (Thorell, 1870) 113c (1♀)
- 653 *Mangora acalypha* (Walckenaer, 1802) 14g (1♀), 14k (1♀ 1♂), 22d (2♀), 22e (2♀), 28a (1♀), 39c (1 juv.), 75 (1♂), 85 (1♂), 88g (3♀ 4♂), 90a (1 juv.), 91c (1♂), 103e (1♀), 103e2 (1♀ 1♂ 2 juv.), 103f (6♀ 4♂), 107b (1♀), 108 (2♀ 4♂), 111 (1 juv.), 113c (1♀ 1♂), 116k (1♂), 116o (4♂), 121b (1♀ 2♂ 1 juv.), 121k (1♀ 1♂ 2 juv.)**Figure 4G, 5D**
- 657 *Nemoscolus laurae* (Simon, 1868) (Simon, 1868) 22f (1♂), 95 (1♂)
- 658 *Neoscona adianta* (Walckenaer, 1802) 12b (1♀), 54 (1♀ 1♂), 57 (1♀), 59 (1♀ 2 juv.),
- 659 89 (1♀)
- 660 *Neoscona subfusca* (C. L. Koch, 1837) 92 (1♀)
- 661 *Zilla diodia* (Walckenaer, 1802) 103e2 (1 juv.), 113a (1♀), 113c (2♀), 115b (1♀)
- 662 *Zygiella x-notata* (Clerck, 1757) 66 (1♀)
- 663
- 664 **Cheiracanthiidae**
- 665 *Cheiracanthium elegans* Thorell, 1875 26 (1♀)
- 666 *Cheiracanthium erraticum* (Walckenaer, 1802) 57 (1♀)
- 667 *Cheiracanthium pennyi* O. P.-Cambridge, 1873 78 (4♀ 3♂)
- 668 *Cheiracanthium striolatum* Simon, 1878 22c (1♀), 22e (1♂), 90b (1 juv.), 107a (1♀)
- 669 (Breitling 2018:figure 2F)
- 670

671 **Clubionidae**

- 672 *Clubiona brevipes* Blackwall, 1841 14i (1♂), 103e (1♂), 103e2 (1♀), 113a (1♀), 113c
673 (1♀), 121k (1♂)
674 *Clubiona comta* C. L. Koch, 1839 14b (4♀), 14d (1♀), 103e (1♀), 103r (1♀), 108 (1♀),
675 113a (1♀ 1♂), 116l (1♂), 116m (1♀), 121b (4♀)
676 *Clubiona diversa* O. P.-Cambridge, 1862 96c (6♀ 4♂), 111 (1♀)
677 *Clubiona neglecta* O. P.-Cambridge, 1862 8 (1♀)
678 *Clubiona pallidula* (Clerck, 1757) 14i (1♀)
679 *Clubiona phragmitis* C. L. Koch, 1843 114 (2♀)
680 *Clubiona pseudoneglecta* Wunderlich, 1994 54 (1♀)
681 *Clubiona subtilis* L. Koch, 1867 102 (2♀ 1♂)
682 *Clubiona terrestris* Westring, 1851 14g (1♂), 14i (1♀), 65 (1♀), 103r (1♀), 121b (2♀),
683 121d (2♀) **Figure 6**
684 *Porrhoclubiona vegeta* (Simon, 1918) 22a (1♀), 22e (1♂)
685

686 **Cybaeidae**

- 687 *Cryphoea silvicola* (C. L. Koch, 1834) 63a (2♀)
688 *Cybaeus raymondi* (Simon, 1916) 83i (1♀) **NEW FOR SPAIN**
689

690 **Dictynidae**

- 691 *Archaeodictyna ammophila* (Menge, 1871) 29 (2♀)
692 *Brigittea latens* (Fabricius, 1775) 58a (1♂), 121b (1♂), 121k (1♀) **Figure 7A**
693 *Dictyna uncinata* Thorell, 1856 14d (2♀ 3♂), 14i (1♀), 59 (1♀)
694 *Lathys heterophthalma* Kulczyński, 1891 97c (1♀) **NEW FOR MAINLAND SPAIN**
695 *Lathys humilis* (Blackwall, 1855) 14d (4♀ 1♂), 14j (1♂), 103e (1♂), 103e2 (1♀), 108
696 (1♀), 116f (2♀ 1♂), 116m (2♀ 2♂), 121d (1♀), 121k (1♀)
697 *Lathys stigmatisata* (Menge, 1869) 22c (5♀), 22e (3♀), 28a (6♀), 46 (1♀)
698 *Marilynia bicolor* (Simon, 1870) 103c (1♂) (Breitling 2018:figure 2R)
699 *Nigma gratiosa* (Simon, 1881) 103e (1♂), 115a (1♂) **Figure 7B** (Breitling 2018:figure
700 **2D**)

701 Two male specimens of this rarely illustrated species were found in Duffey's material.
702 Unfortunately, a female specimen collected at the same site turned out to belong to *N. puella*
703 (see below; also compare illustration in Crespo et al. 2018).

- 704
705 *Nigma hortensis* (Simon, 1871) 91b (1♂)
706 *Nigma puella* (Simon, 1870) 14b (2♀), 14g (1♀ 1♂), 14h (1♀), 14i (3♀), 14l (1♀ 6♂), 103f
707 (1♀), 115a (2♂) **Figure 7C**
708 (*Scoto*)*Lathys* sp. 104 (1♀) **Figure 7D, 8A**

709 This single specimen could not be identified with confidence. The absence of the anterior
710 median eyes could indicate a placement in *Scotolathys*, but the habitus and genitalia would
711 seem to support a placement in *Lathys*, close to *L. narbonensis*. The loss of the AMEs could
712 in this case be an individual variation, rather than indicating a new species.

714 **Dysderidae**

- 715 *Dysdera erythrina* (Walckenaer, 1802) 22a (2♀), 22c (1♂), 47i (1♂), 83f (1♀), 83g (2♀)
716 1♂)
- 717 *Dysdera ninnii* Canestrini, 1868 65 (1♀)
- 718 *Harpactea corticalis* (Simon, 1882) 47c (1♂)
- 719 *Harpactea hombergi* (Scopoli, 1763) 83f (1♀ 1♂), 103r (1♂), 113a (1♀), 113b (3♀ 1♂),
720 113d (1♀ 1♂), 121a (3♀) **Figure 9A, B**
- 721 *Harpactocrates ravastellus* Simon, 1914 83i (1♂), 96b (2♂), 110a (3♀), 122b (1♂)
722 **Figure 9C, D**
- 723 These specimens correspond morphologically to the genitalic type B described by Bidegaray-
724 Batista et al. (2016:fig.7), as would be expected based on the known distribution of this
725 morphotype in the Western and Central Pyrenees. They may thus represent a vicariant sister
726 species of *H. ravastellus* s. str.
- 727
- 728 *Parachtes teruelis* (Kraus, 1955) 88b (1♂), 88c (2♂), 103k (1♂) **Figure 9E**
729
- 730 **Eresidae**
- 731 *Eresus sandaliatus* (Martini & Goeze, 1778) 71 (1♂)
- 732 *Eresus* cf. *solitarius* Simon, 1873 116g (1♂) **Figure 8B, 10A**
- 733 In the absence of a modern revision of the Iberian representatives of *Eresus*, complementing
734 the work of Řezáč et al. (2008) on Central European species, a confident identification of this
735 specimen is not possible at this moment. Both the shape of the conductor and the colouration
736 could indicate that it also belongs to the widely distributed *E. sandaliatus*, which however has
737 not yet been reported from Spain or the adjacent areas of France, while several endemic
738 species are poorly known. Amongst these, *E. solitarius* seems to show the closest similarity
739 (Bacelar 1936), but this putative identification is suggested with even greater hesitation than
740 for other similar cases presented here.
- 741
- 742 *Stegodyphus lineatus* (Latreille, 1817) 74 (1♀), 90a (2♀ 1♂) **Figure 10B–D**
743
- 744 **Filistatidae**
- 745 *Filistata insidiatrix* (Forsskål, 1775) 107a (4♀), 113c (1♀ 1 juv.)
746
- 747 **Gnaphosidae**
- 748 *Aphantaulax cincta* (L. Koch, 1866) 115a (1♂)
- 749 *Civizelotes medianus* (Denis, 1936) 113c (1♀)
- 750 *Drassodes albicans* (Simon, 1878) 113e (1♀)
- 751 *Drassodes fugax* (Simon, 1878) 110b (4♀), 122d (1♀)
- 752 *Drassodes lapidosus* (Walckenaer, 1802) 22a (1♀ 1♂), 29 (2♀ 1♂), 58b (1♀), 113a (1♂),
753 113c (1♀ 1♂), 121g (1♂) **Figure 11A**
- 754 *Drassodes pubescens* (Thorell, 1856) 116o (1♀)
- 755 *Drassodex fritillifer* (Simon, 1914) 99 (1♂) **Figure 11B, C**
- 756 *Drassodex hispanus* (L. Koch, 1866) 116g (1♀) **Figure 12A**
- 757 *Gnaphosa occidentalis* Simon, 1878 52a (1♀) **Figure 12B**
- 758 *Gnaphosa tigrina* Simon, 1878 121f (1♀) **Figure 12C**

759 This female specimen was found in late May, much earlier than most literature records for
760 this species, which refer to collections of mature females in July and August. The
761 identification is based on the illustrations provided by Grimm (1985) – Siberian records
762 assigned to this species, illustrated by Tuneva & Esyunin (2003), are unlikely to be
763 conspecific.

764

765 *Haplodrassus dalmatensis* (L. Koch, 1866) 22f (1♀), 101 (1♂), 121k (1♂)

766 *Haplodrassus lyndae* Abrous & Bosmans, 2018 103l (1♂) **Figure 11D, E**

767 *Haplodrassus rufipes* (Lucas, 1846) 107a (1♂) **Figure 11F, G**

768 *Haplodrassus signifer* (C. L. Koch, 1839) 31 (2♀), 121j (1♂), 121g (1♀), 121o (1♀)

769 **Figure 11H, I**

770 *Haplodrassus typhon* (Simon, 1878) 120a (1♀)

771 The genus *Haplodrassus* is an excellent example of a difficult group, in which Iberian
772 material would have been impossible to identify to species level before the recent revision by
773 Bosmans et al. (2018).

774

775 *Micaria aenea* Thorell, 1871 62 (1♂)

776 *Micaria dives* (Lucas, 1846) 22c (1♀), 22e (1♀), 22f (1♀), 28a (1♀) (Breitling

777 2018:figure 2S)

778 *Micaria formicaria* (Sundevall, 1831) 43 (1♀)

779 *Micaria pulicaria* (Sundevall, 1831) 62 (1♀)

780 *Micaria rossica* Thorell, 1875 31 (1♀)

781 *Micaria silesiaca* L. Koch, 1875 46 (1♀)

782 *Nomisia exornata* (C. L. Koch, 1839) 121k (1♀)

783 *Pterotricha simoni* Dalmas, 1921 90a (1♀), 104 (1♀ 1 juv.), 107a (1♀ 2 juv.), 107b (1♀)

784 **Figure 12D**

785 *Sernokorba tescorum* (Simon, 1914) 88g (1♂) (Breitling 2018:figure 2C)

786 *Trachyzelotes mutabilis* (Simon, 1878) 113e (1♂) **Figure 11J**

787 *Urozelotes rusticus* (L. Koch, 1872) 10 (1♂)

788 *Zelotes fulvopilosus* (Simon, 1878) 88g (1♀) (Breitling 2018:figure 2J)

789 *Zelotes gallicus* Simon, 1914 22a (1♀)

790 *Zelotes latreillei* (Simon, 1878) 121g (1♀) **Figure 12E**

791 *Zelotes longipes* (L. Koch, 1866) 22c (1♀)

792 *Zelotes manius* (Simon, 1878) 103l (1♂), 116g (1♀) **Figure 11K, 12F**

793 *Zelotes thorelli* Simon, 1914 115b (1♀)

794

795 **Hahniidae**

796 *Antistea elegans* (Blackwall, 1841) 55 (1♂), 83d (1♀), 102 (3♀ 2♂), 121j (1♀) **Figure 13A**

797 *Chorizomma subterraneum* Simon, 1872 83g (2♀)

798 *Hahnia helveola* Simon, 1875 83f (3♀ 1♂), 83g (8♀), 103r (1♀ 1♂), 113d (1♀), 116i (5♀)

799 *Hahnia nava* (Blackwall, 1841) 40b (1♀ 1♂), 41 (1♂), 46 (1♀ 1♂), 97d (1♂) **Figure**

800 **13B**

801 *Hahnia ononidum* Simon, 1875 15 (1♀), 27a (3♀ 2♂), 116i (4♀ 2♂) **Figure 13C**

802 *Hahnia petrobia* Simon, 1875 Simon, 1875 39c (1♀), 83j (4♀), 88e (1♀), 103j (5♀),
803 113a (1♀), 115b (1♀)

804 *Iberina candida* (Simon, 1875) 22c (1♀), 39c (1♀), 47c (3♀), 88d (1♀), 97d (2♀ 1♂),
805 103k (1♀), 121a (1♂)

806 *Iberina montana* (Blackwall, 1841) 83b (2♀), 83g (15♀), 122c (1♀)

807

808 **Hersiliidae**

809 *Hersiliola cf. simoni* (O. P.-Cambridge, 1872) 107b (1♀) **Figure 14**

810 This single female specimen is identified only with some reluctance. The copulatory duct
811 shows clearly fewer coils than illustrated, e.g., by Wiehle (1960:fig. 15, sub *H. lucasi*),
812 Ribera et al. (1988:figs. 9 and 10), Levy (2003:figs. 55 and 56), and Foord & Dippenaar-
813 Schoeman (2005:fig. 3G). However, it matches the illustration by Benoit (1974:fig. 6), based
814 on Tunisian material, and the illustrations by Ribera et al. (1988: figs. 7 and 8, sub *H.*
815 *maculata* – the confusion of the figures was already pointed out by Peru 2011, but is not yet
816 documented in the WSC). The female genitalia are also closely similar in *H. sternbergi*
817 (Marusik & Fet 2009:figs. 7(9) and 8(2)), from Central Asia, but zoogeographic
818 considerations argue against an attribution to this species. *H. macullulata*, the second species
819 in this genus reported from Spain, has even more coils in the copulatory duct, according to
820 the illustrations in Benoit (1974:fig. 5), Levy (2003:fig. 60), Foord (2008:fig. 32), and Foord
821 & Dippenaar-Schoeman (2005:fig. 2G).

822

823 *Tama edwardsi* (Lucas, 1846) 90b (1♀), 104 (1♀)

824

825 **Leptonetidae**

826 *Leptoneta paroculus* Simon, 1907 83b (2♀ 2♂ 1 juv.), 83g (2♀ 2♂), 83i (1♂)

827 **Figure 15** (Breitling 2018:figure 2H)

828

829 **Linyphiidae**

830 *Acartauchenius scurrilis* (O. P.-Cambridge, 1873) 121n (1♂)

831 *Agyneta cauta* (O. P.-Cambridge, 1903) 23 (2♂), 83f (1♂)

832 *Agyneta cf. alpica* Tanasevitch, 2000 16 (2♂) **Figure 16A, B**

833 *Agyneta equestris* (L. Koch, 1881) 122d (2♀ 3♂) **NEW FOR SPAIN Figure 16C**

834 *Agyneta fuscipalpa* (C. L. Koch, 1836) 83c (1♂)

835 *Agyneta gulosa* (L. Koch, 1869) 12a (1♀), 69 (3♀ 4♂), 121f (1♀)

836 *Agyneta nigripes* (Simon, 1884) 21c (15♀), 27a (1♀), 31 (3♀), 121i (2♀) **NEW FOR**

837 **SPAIN**

838 *Agyneta rurestris* (C. L. Koch, 1836) 4a (1♀), 12e (1♂), 17b (1♀), 18 (6♀ 1♂), 21c (2♀ 1♂),
839 46 (1♀), 62 (1♂), 83c (1♂), 83g (1♂), 87 (1♂), 88b (1♂), 88f (2♂), 89 (34♀ 4♂), 103m
840 (1♂), 110b (2♀), 111 (1♂), 118 (1♀), 121c (1♂) **Figure 16D, E**

841 *Alioranus pauper* (Simon, 1881) 7b (1♂), 93a (4♀ 2♂)

842 *Araeoncus anguineus* (L. Koch, 1869) 18 (5♀), 55 (1♀), 69 (1♀ 1♂) **NEW FOR**

843 **FRANCE Figure 17A**

844 *Bathyphantes approximatus* (O. P.-Cambridge, 1871) 38 (1♀)

845 *Bathyphantes gracilis* (Blackwall, 1841) 54 (1♀), 86 (1♂)

- 846 *Bolyphantes alticeps* (Sundevall, 1833) 34 (1♀)
847 *Bolyphantes luteolus* (Blackwall, 1833) 27b (2♀), 40b (1♀), 41 (1♀)
848 *Canariphantes ritae* Bosmans, 1985 104 (1♀) **Figure 17B**
849 This species was transferred from *Lepthyphantes* by Bosmans et al. (2019).
850
851 *Canariphantes tenerrimus* (Simon, 1929) 104 (1♀ 1♂) **Figure 16F, 17C**
852 The shape of the lamella characteristica appears to be quite variable in this species. In this
853 male specimen, it resembles the shape illustrated by Denis (1934; sub *Lepthyphantes*
854 *homonymus*); the identification is confirmed by the presence of a matching female in the
855 same sample.
856
857 *Canariphantes zonatus* (Simon, 1884) 9 (1♂) **Figure 16G**
858 *Caracladus avicula* (L. Koch, 1869) 69 (1♀)
859 *Centromerita bicolor* (Blackwall, 1833) 34 (1♀ 1♂), 117b (1♀ 1♂), 122c (1♂)
860 *Centromerita concinna* (Thorell, 1875) 12c (1♀), 40b (2♀), 46 (1♀), 117a (1♀)
861 *Centromerus albidus* Simon, 1929 27a (1♀), 103n (8♀) **Figure 17D, E**
862 *Centromerus capucinus* (Simon, 1884) 84 (1♀)
863 *Centromerus dilutus* (O. P.-Cambridge, 1875) 83g (1♂), 97d (6♀ 3♂)
864 *Centromerus isaiai* Bosmans, 2015 47c (1♀) (Breitling 2018:figure 2N)
865 *Centromerus pabulator* (O. P.-Cambridge, 1875) 109 (1♂) **Figure 18A**
866 *Centromerus prudens* (O. P.-Cambridge, 1873) 83g (1♀), 89 (1♀), 96a (3♀)
867 *Centromerus satyrus* (Simon, 1884) 47c (1♀), 47h (2♀)
868 *Centromerus sellarius* (Simon, 1884) 83g (1♀)
869 *Centromerus semiater* (L. Koch, 1879) 38 (8♀)
870 *Centromerus sylvaticus* (Blackwall, 1841) 34 (1♀ 2♂)
871 *Ceratinella brevipes* (Westring, 1851) 61 (1♀)
872 *Ceratinella brevis* (Wider, 1834) 14e (2♂), 33 (1♀), 111 (1♂)
873 *Ceratinella scabrosa* (O. P.-Cambridge, 1871) 36 (1♀)
874 *Cinetata gradata* (Simon, 1881) 116m (14♀ 2♂)
875 *Cnephalocotes obscurus* (Blackwall, 1834) 14e (1♂), 22a (1♀)
876 *Collinsia inerrans* (O. P.-Cambridge, 1885) 69 (1♂)
877 *Cresmatoneta mutinensis* (Canestrini, 1868) 7b (1♂)
878 *Dicymbium tibiale* (Blackwall, 1836) 14c (1♀)
879 *Diplocephalus arnoi* Isaia, 2005 63b (2♀)
880 *Diplocephalus cristatus* (Blackwall, 1833) 103a (3♀), 124 (6♀ 1♂)
881 *Diplocephalus graecus* (O. P.-Cambridge, 1873) 54 (1♀)
882 *Diplocephalus helleri* (L. Koch, 1869) 34 (20♀ 6♂)
883 *Diplocephalus latifrons* (O. P.-Cambridge, 1863) 79 (1♀), 96a (3♀)
884 *Diplocephalus permixtus* (O. P.-Cambridge, 1871) 117a (3♂), 117b (1♀ 2♂), 121e (1♀),
885 121h (1♀)
886 *Diplocephalus picinus* (Blackwall, 1841) 63a (1♀), 103b (1♀)
887 *Diplocephalus protuberans* (O. P.-Cambridge, 1875) 6 (1♀), 17b (1♀), 55 (5♀), 121l
888 (6♀) **Figure 17F**
889 *Diplostyla concolor* (Wider, 1834) (Wider, 1834) 50 (1♂), 62 (1♂), 120e (1♀)

- 890 *Erigone atra* Blackwall, 1833 14f (3♀), 18 (3♀), 52a (2♂), 52c (1♀ 2♂), 123 (1♀)
- 891 *Erigone cristatopalpus* Simon, 1884 18 (1♂)
- 892 *Erigone dentipalpis* (Wider, 1834) 1 (1♂), 14f (2♀), 14h (1♂), 22f (1♂), 52c (1♂), 54
893 (2♂), 89 (1♀ 2♂), 96d (1♀ 2♂), 96e (1♀), 118 (1♀), 121e (1♀), 123 (2♂)
- 894 *Erigone jugorum* Simon, 1884 17b (3♀)
- 895 *Erigone remota* L. Koch, 1869 21a (17♀ 7♂), 21b (6♀ 2♂), 21c (1♀ 1♂)
- 896 *Erigone tenuimana* Simon, 1884 18 (2♀)
- 897 *Erigonella subelevata* (L. Koch, 1869) 69 (1♀)
- 898 *Frontinellina frutetorum* (C. L. Koch, 1834) 51 (1♂), 88g (2♀ 1♂), 103e (1♀), 103e2 (1♀)
899 1♂), 103f (1♂), 113c (3♀), 113d (1♀ 1♂), 115a (1♂), 121k (1♀)
- 900 *Gnathonarium dentatum* (Wider, 1834) 38 (11♀), 124 (1♂)
- 901 *Gonatium paradoxum* (L. Koch, 1869) 103n (1♀) **NEW FOR SPAIN**
- 902 *Gongylidiellum vivum* (O. P.-Cambridge, 1875) 102 (1♀)
- 903 *Hilaira excisa* (O. P.-Cambridge, 1871) 6 (1♂), 34 (6♀ 2♂), 121e (3♀), 121h (2♀)
- 904 **NEW FOR SPAIN Figure 18B**
- 905 *Hypomma bituberculatum* (Wider, 1834) 38 (6♀ 4♂)
- 906 *Hypomma fulvum* (Bösenberg, 1902) 38 (3♀ 2♂)
- 907 *Improphantes decolor* (Westring, 1861) 12c (1♀)
- 908 *Lasiargus hirsutus* (Menge, 1869) 22f (4♀ 4♂)
- 909 *Lepthyphantes minutus* (Blackwall, 1833) 116f (2♀)
- 910 *Lepthyphantes notabilis* Kulczyński, 1887 116a (1♀)
- 911 *Leptorhoptrum robustum* (Westring, 1851) 34 (9♀ 3♂)
- 912 *Linyphia hortensis* Sundevall, 1830 62 (5♀ 2♂)
- 913 *Lophomma punctatum* (Blackwall, 1841) 23 (1♀)
- 914 *Mansuphantes mansuetus* (Thorell, 1875) 41 (1♀)
- 915 *Mansuphantes pseudoarciger* (Wunderlich, 1985) 69 (2♂)
- 916 *Mansuphantes simoni* (Kulczyński, 1894) 20 (2♀), 39c (2♀)
- 917 *Maso sundevalli* (Westring, 1851) 103j (1♀), 120b (1♀)
- 918 *Mecopisthes nicaeensis* (Simon, 1884) 29 (1♀) **Figure 19A**
- 919 This specimen clearly belongs to the same species as the female illustrated by Lecigne (2018;
920 sub *Mecopisthes* sp., from the Côte d'Azur, less than 100 km west of the type locality of *M.*
921 *nicaeensis* in Nice). Duffey's specimen was collected another 150 km further west along the
922 French coast.
- 923
- 924 *Mecynargus paetulus* (O. P.-Cambridge, 1875) 18 (3♀), 21a (65♀ 27♂), 21b (4♀ 2♂),
925 21c (6♀ 3♂), 55 (2♂)
- 926 *Metopobactrus prominulus* (O. P.-Cambridge, 1873) 85 (2♀), 88g (1♀ 2♂), 110b
927 (1♀), 111 (1♂), 116e (1♀), 116l (1♂), 116m (1♂), 116o (1♀), 121p (2♂) **Figure 18C, D**
- 928 The illustrated male belongs to the *schenkeli* form. Its occurrence together with typical
929 specimens and the identical shape of the genitalia confirms the synonymy proposed by Muff
930 et al. 2007. This species is remarkably polymorphic in the shape of the male prosoma, as
931 described by Crespo et al. 2018.
- 932
- 933 *Micrargus herbigradus* (Blackwall, 1854) 23 (1♀), 36 (1♂), 41 (2♀), 69 (1♂)

- 934 *Micrargus laudatus* (O. P.-Cambridge, 1881) 116o (1♀)
- 935 *Microctenonyx subitaneus* (O. P.-Cambridge, 1875) 92 (1♀), 121i (1♀)
- 936 *Microneta viaria* (Blackwall, 1841) 27b (5♀ 2♂), 39c (2♀), 62 (1♀), 63a (1♀ 2♂), 65 (1♀),
937 83c (1♀), 83g (1♂), 96b (1♀)
- 938 *Minicia marginella* (Wider, 1834) 12e (1♀), 28a (1♀), 33 (1♂), 39c (3♀), 40a (1♂)
- 939 *Minyriolus pusillus* (Wider, 1834) 27a (3♀ 5♂), 83f (1♂), 97a (1♀)
- 940 *Monocephalus fuscipes* (Blackwall, 1836) 36 (1♀), 96a (10♀), 97d (3♀ 1♂), 116o (1♀),
941 122b (2♀), 122c (1♂)
- 942 *Neriere furtiva* (O. P.-Cambridge, 1871) 7b (1♀), 22e (2♀), 22f (1♀), 28a (1♀)
- 943 *Neriere peltata* (Wider, 1834) 97b (1♀)
- 944 *Nusoncus nasutus* (Schenkel, 1925) 36 (1♂), 62 (1♀)
- 945 *Obscuriphantes obscurus* (Blackwall, 1841) 116m (1♀ 3♂), 121d (1♀)
- 946 *Oedothorax agrestis* (Blackwall, 1853) 2 (1♀), 52c (3♀), 55 (1♀), 117b (3♀)
- 947 *Oedothorax apicatus* (Blackwall, 1850) 124 (1♂)
- 948 *Oedothorax fuscus* (Blackwall, 1834) 14f (1♀), 116k (4♀ 1♂), 117a (1♂)
- 949 *Oedothorax gibbosus* (Blackwall, 1841) 23 (4♀ 2♂)
- 950 *Oedothorax retusus* (Westring, 1851) 13 (1♀), 34 (2♀), 117b (1♀), 121e (2♀), 121h (2♀ 2♂),
951 121j (2♀)
- 952 *Oreonetides glacialis* (L. Koch, 1872) 21a (4♀ 3♂) **Figure 18E, 19B**
- 953 *Palliduphantes cernuus* (Simon, 1884) 16 (1♀), 83g (2♀ 2♂), 116i (1♀), 117c (1♂)
- 954 *Palliduphantes ericaeus* (Blackwall, 1853) 23 (3♀)
- 955 *Palliduphantes insignis* (O. P.-Cambridge, 1913) 22d (1♀)
- 956 *Palliduphantes pallidus* (O. P.-Cambridge, 1871) 39a (1♀)
- 957 *Parapelecopsis nemoralis* (Blackwall, 1841) 22f (1♀), 40a (3♀ 1♂), 88c (1♀), 115b (1♀),
958 116i (1♀)
- 959 *Pelecopsis bucephala* (O. P.-Cambridge, 1875) 93c (25♀) **Figure 19C**
- 960 *Pelecopsis elongata* (Wider, 1834) 27a (2♀), 47b (1♀), 47d (1♀), 62 (1♀), 70 (1♀)
- 961 *Pelecopsis inedita* (O. P.-Cambridge, 1875) 90a (1♂)
- 962 *Pelecopsis parallela* (Wider, 1834) 58b (1♂), 96e (1♀), 116o (1♂)
- 963 *Peponocranium ludicrum* (O. P.-Cambridge, 1861) 12e (1♀)
- 964 *Piniphantes pinicola* (Simon, 1884) 27a (1♀), 121f (1♀)
- 965 *Pocadicnemis juncea* Locket & Millidge, 1953 7a (31♀ 1♂), 7b (4♀), 35 (6♀), 88g (1♂)
- 966 *Pocadicnemis pumila* (Blackwall, 1841) 23 (4♀ 2♂), 39c (13♀ 4♂), 52c (1♀)
- 967 *Porrhomma convexum* (Westring, 1851) 34 (4♀ 1♂) **Figure 18F**
- 968 *Porrhomma microphthalmum* (O. P.-Cambridge, 1871) 54 (1♀)
- 969 *Porrhomma pygmaeum* (Blackwall, 1834) 38 (1♂)
- 970 *Prinerigone vagans* (Audouin, 1826) 18 (1♀), 52b (1♂), 116k (2♀)
- 971 *Saaristoa abnormis* (Blackwall, 1841) 83b (1♀ 1♂)
- 972 *Silometopus curtus* (Simon, 1881) 7b (1♀) (Breitling 2018:figure 20)
- 973 *Sintula furcifer* (Simon, 1911) 97e (1♀)
- 974 *Styloctetor romanus* (O. P.-Cambridge, 1873) 22d (1♀), 22e (1♀), 40b (1♂), 96e (1♂),
975 105 (1♀)
- 976 *Tapinocyba mitis* (O. P.-Cambridge, 1882) 116i (4♀)
- 977 *Tapinocyba pallens* (O. P.-Cambridge, 1873) 33 (1♀), 39a (1♀)

- 978 *Tapinopa longidens* (Wider, 1834) 103j (1♀), 103k (1♀), 120f (1♀)
 979 *Tenuiphantes flavipes* (Blackwall, 1854) 83f (2♀), 84 (1♀), 88a (2♀), 115b (2♀), 124
 980 (1♀)
 981 *Tenuiphantes herbicola* (Simon, 1884) 18 (1♀), 47c (1♀), 47h (1♀ 1♂), 47i (3♀), 83d
 982 (2♀), 121j (1♀)
 983 *Tenuiphantes tenebricola* (Wider, 1834) 62 (1♀)
 984 *Tenuiphantes tenuis* (Blackwall, 1852) 14h (1♀), 22a (1♀), 22f (1♀ 2♂), 28a (2♀ 1♂),
 985 40b (3♀ 1♂), 41 (1♀), 46 (1♀), 62 (1♂), 63a (1♀ 1♂), 83g (2♀), 89 (1♀), 110b (1♀), 116o
 986 (2♀ 4♂)
 987 *Tenuiphantes zimmermanni* (Bertkau, 1890) 83c (1♂), 83g (5♀ 2♂), 83i (1♀ 2♂), 104 (2♂),
 988 122b (1♀)
 989 *Theonina cornix* (Simon, 1881) 47d (4♀ 1♂), 47i (1♀ 1♂)
 990 *Tiso vagans* (Blackwall, 1834) 69 (1♀ 1♂), 85 (1♀), 87 (1♀ 1♂), 96d (2♀ 1♂), 111
 991 (1♂), 116o (2♂)
 992 *Trichoncus* cf. *auritus* (L. Koch, 1869) 12c (1♀), 12e (1♀), 40a (1♀) **Figure 19D**
 993 The epigyne of these specimens differs considerably from that of East European females
 994 illustrated, e.g., by Miller (1947, sub *Trichoncus kulczynskii*), but shows close similarity to
 995 that of Swiss specimens illustrated by Wunderlich (2011), who already expressed doubt about
 996 the conspecificity of this material. It is, thus, quite possible that Duffey's French specimens
 997 represent a vicariant West European sister species of *T. auritus* s. str. The genus clearly is in
 998 need of revision, and this identification, as well as that of the subsequent species, remains
 999 somewhat doubtful.
 1000
 1001 *Trichoncus helveticus* Denis, 1965 12a (1♀)
 1002 *Trichoncus saxicola* (O. P.-Cambridge, 1861) 87 (1♀), 89 (1♂), 103s (1♂), 121k (1♂),
 1003 121n (1♀) **Figure 18G**
 1004 The illustrated male seems to resemble most closely the form described by Denis (1965) as
 1005 *T. varipes*, and synonymized by Wunderlich (2011), especially in the shape of the dorsal
 1006 tibial apophysis.
 1007
 1008 *Trichoncus scrofa* Simon, 1884 39c (1♂)
 1009 *Trichoncus vasconicus* Denis, 1944 20 (1♀), 120e (1♀)
 1010 *Trichopterna cito* (O. P.-Cambridge, 1873) 22e (3♀), 28a (2♀), 40b (1♀), 116o (1♀) **NEW**
 1011 **FOR SPAIN**
 1012 *Typhochrestus digitatus* (O. P.-Cambridge, 1873) 12c (1♀), 83c (1♀)
 1013 *Walckenaeria acuminata* Blackwall, 1833 83g (1♀), 103r (1♀)
 1014 *Walckenaeria antica* (Wider, 1834) 41 (1♀), 85 (1♀), 117b (1♀ 1♂), 121k (1♀), 121l (1♂)
 1015 *Walckenaeria corniculans* (O. P.-Cambridge, 1875) 119 (1♀)
 1016 *Walckenaeria cucullata* (C. L. Koch, 1836) 116i (1♀)
 1017 *Walckenaeria dalmasi* (Simon, 1914) 83f (3♀ 1♂), 83g (1♀)
 1018 *Walckenaeria vigilax* (Blackwall, 1853) 21c (2♀ 2♂)
 1019
 1020 **Liocranidae**
 1021 *Apostenus fuscus* Westring, 1851 83b (1♀), 83g (2♀), 83i (1♂), 103c (1♀)

- 1022 *Scotina celans* (Blackwall, 1841) 88c (1♀ 2♂), 88e (1♂), 103j (1♂), 103k (3♀), 103n
 1023 (1♂), 113a (1♀), 115b (2♀)
- 1024 *Scotina paillardi* (L. Koch, 1881) 88e (1♀), 97d (1♂), 102 (1♂), 103o (1♀ 1♂ 1 juv.)
 1025
- 1026 **Lycosidae**
- 1027 *Alopecosa albofasciata* (Brullé, 1832) 7a (1♂)
- 1028 *Alopecosa cuneata* (Clerck, 1757) 12c (1♂), 12d (1♀ 1♂), 14a (12♂), 14e, 39b (1♂), 40b
 1029 (1♀), 96d (1♂), 121g (1♀)
- 1030 *Alopecosa cursor* (Hahn, 1831) 12c (4♂), 12d (1♀)
- 1031 *Alopecosa fabrilis* (Clerck, 1757) 22f (1♀)
- 1032 *Alopecosa farinosa* (Herman, 1879) 12d (1♀)
- 1033 *Alopecosa pulverulenta* (Clerck, 1757) 12c (1♀), 14a, 14e, 22b (1♂), 23 (1♀), 121k
 1034 (1♂)
- 1035 *Arctosa fulvolineata* (Lucas, 1846) 7b (2♀)
- 1036 *Arctosa lacustris* (Simon, 1876) 103d (1♀)
- 1037 *Arctosa leopardus* (Sundevall, 1833) 52c (1♀), 116k (5♀ 7♂), 121g (1♂) **Figure 20A, B**
- 1038 *Arctosa maculata* (Hahn, 1822) 83b (1♂), 83c (1♀)
- 1039 *Arctosa personata* (L. Koch, 1872) 22c (1♀)
- 1040 *Aulonia albimana* (Walckenaer, 1805) 88c (1♀), 88g (1♀ 2♂), 98 (1♀), 103s (1♂)
- 1041 *Hygrolycosa rubrofasciata* (Ohlert, 1865) 124 (1♂) **Figure 20C–F**
- 1042 *Pardosa agrestis* (Westring, 1861) 22f (1♀), 77 (2♂)
- 1043 *Pardosa albatula* (Roewer, 1951) 72 (1♂) (Breitling 2018:figure 2A)
- 1044 *Pardosa amentata* (Clerck, 1757) 23 (1♂), 34 (2♀ 1 juv.), 55 (1♀), 62 (1♀), 96d (1♀),
 1045 121e (1♀ 5♂), 121j (2♀ 2♂)
- 1046 *Pardosa bifasciata* (C. L. Koch, 1834) 88g (2♀ 2♂), 116p (2♂)
- 1047 *Pardosa cribrata* Simon, 1876 77 (1♀)
- 1048 *Pardosa femoralis* Simon, 1876 116k (2♀ 1♂) **Figure 21A**
- 1049 *Pardosa lugubris* (Walckenaer, 1802) 62 (1♀ 2♂)
- 1050 *Pardosa mixta* (Kulczyński, 1887) 55 (1♀) **Figure 21B**
- 1051 *Pardosa monticola* (Clerck, 1757) 80 (2♂), 83c (1♀), 85 (1♂), 96d (1♀ 1♂), 108 (1♂),
 1052 116g (1♀), 116k (2♀ 3♂), 121g (4♀ 6♂), 121j (3♀ 2♂), 121k (1♀), 121o (6♀ 1♂),
- 1053 *Pardosa morosa* (L. Koch, 1870) 83c (1♀), 84 (3♀), 95 (1♂), 103d (5♀ 1♂) **Figure**
 1054 **21C, 22A**
- 1055 *Pardosa nigriceps* (Thorell, 1856) 12c (1♂), 116o (1♀ 1♂)
- 1056 *Pardosa oreophila* Simon, 1937 17a (1♂), 110b (1♀)
- 1057 *Pardosa paludicola* (Clerck, 1757) 116k (1♀)
- 1058 *Pardosa prativaga* (L. Koch, 1870) 28b (1♂), 44 (1♂), 52c (1♀)
- 1059 *Pardosa pullata* (Clerck, 1757) 14a, 14b (1♂), 14e, 83d (1♀), 83g (1♀), 85 (4♀ 2♂),
 1060 116o (2♂), 117b (1♀), 121b (3♀ 5♂), 121f (1♀), 121g (2♀) **Figure 21D, 22B**
- 1061 The Spanish specimens were reported as *P. pyrenaica* in Breitling 2018, but a closer
 1062 examination of more material indicates that they also belong to *P. pullata*, despite the habitat
 1063 and locality)
- 1064
- 1065 *Pardosa riparia* (C. L. Koch, 1833) 34 (1♂)

- 1066 *Pardosa saltans* Töpfer-Hofmann, 2000 39a (1♂), 108 (3♀ 1♂), 116h (1♀), 121k (2♂)
 1067 **NEW FOR SPAIN**
- 1068 *Pardosa* sp. (Isaia et al. 2015) 31 (1♀) **Figure 21E**
 1069 This specimen, a member of the *P. monticola* group, is likely to belong to the same species as
 1070 the specimens reported as *Pardosa* cf. *albatula* by Paschetta et al. (2013) and as *Pardosa* sp.
 1071 by Isaia et al. (2015) from alpine pastures in the Italian part of the Alpes Maritimes (M. Isaia,
 1072 pers. comm.). The specific identity will remain unclear until a more comprehensive revision
 1073 of this difficult species group has been carried out.
 1074
- 1075 *Pardosa tenuipes* L. Koch, 1882 14a, 14c (1♂), 14e, 47e (1♂)
 1076 *Pardosa wagleri* (Hahn, 1822) 103d (1♂)
 1077 *Pirata tenuitarsis* Simon, 1876 52c (1♀)
 1078 *Piratula hygrophila* (Thorell, 1872) 52c (2♀), 124 (1♀)
 1079 *Pyrenecosa pyrenaea* (Simon, 1876) 122c (1♀) **NEW FOR SPAIN**
 1080 *Pyrenecosa rupicola* (Dufour, 1821) 89 (3♂), 113e (1♂) **Figure 22C**
 1081 *Trabea cazorla* Snazell, 1983 88b (1♀), 88d (1♀), 88e (1♀), 113c (1♂) **Figure 22D, E**
 1082 *Trochosa ruricola* (De Geer, 1778) 52c (2♀)
 1083 *Trochosa terricola* Thorell, 1856 14e, 116k (1♀), 121k (1♀)
 1084 *Xerolycosa miniata* (C. L. Koch, 1834) 77 (1♂)
 1085 *Xerolycosa nemoralis* (Westring, 1861) 45a (1♂), 83b (2♀ 1♂), 108 (1♂ 1 juv.), 110b
 1086 (1♂), 116b (2♀ 2♂)
 1087
- 1088 **Mimetidae**
 1089 *Ero aphana* (Walckenaer, 1802) 14i (1♀), 107a (1♀)
 1090 *Mimetus laevigatus* (Keyserling, 1863) 113c (1♀) **Figure 23**
 1091
- 1092 **Miturgidae**
 1093 *Zora manicata* Simon, 1878 12e (1♀)
 1094 *Zora parallela* Simon, 1878 22e (2♀), 35 (1 juv.), 88g (1♀ 2♂)
 1095 *Zora pardalis* Simon, 1878 88c (1♀), 88g (1♀)
 1096 *Zora spinimana* (Sundevall, 1833) 41 (1♀), 120d (1♀ 1♂)
 1097
- 1098 **Nemesiidae**
 1099 *Nemesia dorthesi* Thorell, 1875 101 (1♂)
 1100
- 1101 **Oecobiidae**
 1102 *Uroctea durandi* (Latreille, 1809) 103p (1 juv.), 113c (1♀)
 1103
- 1104 **Oonopidae**
 1105 *Oonops domesticus* Dalmas, 1916 47c (1♀)
 1106 *Oonops procerus* Simon, 1882 97d (10♀ 10♂ 3 juv.) **Figure 24A–D**
 1107 Even though the male pedipalp differs considerably from earlier illustrations by Duffey &
 1108 Brignoli (1981:fig. 1), the illustration is based on material from the same sample. The
 1109 similarity to *Oonops gavarrensis* Bosselaers, 2017, is even more pronounced than in the

1110 earlier illustrations, but this is certainly a different species, especially as the female genitalia
1111 are completely different.

1112

1113 *Silhouettella loricatula* (Roewer, 1942) 47d (1♀)

1114

1115 **Oxyopidae**

1116 *Oxyopes heterophthalmus* (Latreille, 1804) 59 (4♀)

1117

1118 **Palpimanidae**

1119 *Palpimanus gibbulus* Dufour, 1820 90b (1♀)

1120

1121 **Philodromidae**

1122 *Celerrimus duffeyi* Lecigne, Cornic, Oger & Van Keer, 2019 91a (1♂) **Figure**
1123 **25A** (Breitling 2018:figure 2K)

1124 This highly unusual philodromid was only recently described by Lecigne et al. (2019), with
1125 Duffey's material being designated as one of the paratypes.

1126

1127 *Philodromus albidus* Kulczyński, 1911 14g (1♂), 14i (1♀)

1128 *Philodromus aureolus* (Clerck, 1757)76 (2♀ 1♂), 121b (3♀)

1129 *Philodromus cespitum* (Walckenaer, 1802) 14l (1♀), 103e (1♀)

1130 *Philodromus dispar* Walckenaer, 1826 108 (1♀ 1♂), 113c (1♂), 113d (1♀ 1♂), 121b
1131 (5♀ 2♂), 121b (2♀), 121d (1♀), 121k (1♂), 122a (1♀) **Figure 25B, C**

1132 *Philodromus emarginatus* (Schrank, 1803) 91a (1♀), 108 (1♂), 113d (1♂), 121b (1♂)

1133

Figure 25D

1134 *Philodromus fuscocolimbatus* Lucas, 1846 91a (1♂), 103e (1♂), 103e2 (1♀ 1♂), 113c (1♀
1135 1♂), 115a (1♀ 1♂), 121k (2♀ 1♂) **Figure 25E**

1136 *Philodromus parietalis* Simon, 1875 116f (1♀)

1137 *Philodromus praedatus* O. P.-Cambridge, 1871 113e (2♂)

1138 *Philodromus rufus* Walckenaer, 182614b (1♂), 54 (1♀), 115a (2♀)

1139 *Philodromus vagulus* Simon, 1875 125 (1♀)

1140 *Pulchellodromus pulchellus* (Lucas, 1846) 22c (2♀ 1♂), 22e (2♂), 28a (1♀), 115a (1♀)

1141 *Thanatus atratus* Simon, 1875 61 (1♂)

1142 *Thanatus formicinus* (Clerck, 1757) 90b (1♀), 104 (1♀), 107a (1♀)

1143 *Thanatus cf. lineatipes* Simon, 1870 94 (1♀) **Figure 25F**

1144 This specimen is assigned to this poorly described species with some hesitation, based on the
1145 photographs of Spanish specimens from Robert Bosmans' collection on the website of Pierre
1146 Oger.

1147

1148 *Tibellus oblongus* (Walckenaer, 1802) 52a (1♀), 103f (1♀) **Figure 25G**

1149

1150 **Pholcidae**

1151 *Holocnemus caudatus* (Dufour, 1820) 81 (1♀ 1 juv.), 92 (1 juv.), 107a (2 juv.), 107b
1152 (3♀ 2♂), 113d (1♀) **Figure 26A–D**

1153 *Holocnemus hispanicus* Wiehle, 1933 90b (1♀ 1♂) **Figure 26E, F**

- 1154 *Pholcus opilionoides* (Schrank, 1781) 12d (1♂ 1 juv.), 84 (1♂), 88b (1♀) **Figure**
 1155 **26G**
- 1156 *Spermophorides mammata* (Senglet, 1973) 90a (1♀)
 1157
- 1158 **Phrurolithidae**
- 1159 *Liophrurillus flavitarsis* (Lucas, 1846) 7a (2♀ 1 juv.)
 1160 *Phrurolithus festivus* (C. L. Koch, 1835) 84 (1♀), 113b (1♀ 1♂), 121j (1♂), 121o (1♀)
 1161 **Figure 27A, B**
- 1162 *Phrurolithus nigrinus* (Simon, 1878) 12d (1♂ 1 juv.), 12e (1♀), 22a (1♀), 83c (1♀), 83g
 1163 (1♀), 84 (2♀), 113d (1♀)
 1164 *Phrurolithus* cf. *szilyi* Herman, 1879 88g (1♂), 91a (1♀), 115b (3♀), 121k (2♀ 1♂)
 1165 **Figure 27C (Breitling 2018:figure 2I)**
- 1166 The identity of these specimens remains slightly dubious. *P. szilyi* shows a strikingly disjunct
 1167 distribution, being reported on the one hand from the Iberian Peninsula, and on the other hand
 1168 from Austria and the Czech Republic eastwards. While the male pedipalp appears very
 1169 similar (see figure in Breitling 2018), the structure of the internal female genitalia in the
 1170 Spanish specimens is more difficult to reconcile with published illustrations (e.g. Grimm
 1171 1986:fig. 55, Komnenov et al. 2016:figs. 83 and 84, and Wiehle 1967:fig. 71). Could this be
 1172 another case of vicariant sister species?
 1173
- 1174 **Pisauridae**
- 1175 *Pisaura mirabilis* (Clerck, 1757) 103s (1♂), 121b (1♀) **Figure 28**
 1176
- 1177 **Salticidae**
- 1178 *Aelurillus luctuosus* (Lucas, 1846) 81 (1♂), 104 (1♂)
 1179 *Aelurillus v-insignitus* (Clerck, 1757) 40b (3♀ 3♂), 116g (4♂) **Figure 29A,B**
 1180 *Attulus distinguendus* (Simon, 1868) 22f (1♀)
 1181 *Ballus chalybeius* (Walckenaer, 1802) 14g (1♀), 14l (1♀), 108 (3♀)
 1182 *Calositticus rupicola* (C. L. Koch, 1837) 34 (1♀ 1♂), 103m (1♂)
 1183 *Carrhotus xanthogramma* (Latreille, 1819) 14f (1♂), 14i (1♀), 103e (1♀), 103e2 (2♀)
 1184 **Figure 31A**
- 1185 *Chalcoscirtus infimus* (Simon, 1868) 29 (1♂)
 1186 *Cyrba algerina* (Lucas, 1846) 107b (1♂)
 1187 *Dendryphantès rudis* (Sundevall, 1833) 122a (1♀)
 1188 *Euophrys frontalis* (Walckenaer, 1802) 22a (2♂), 47d (1♀), 48 (1♀), 83c (1♀), 88b
 1189 (1♀), 88g (1♀), 108 (1♀ 1♂), 110b (1♂)
 1190 *Euophrys gambosa* (Simon, 1868) 22c (2♀), 22e (2♀ 2♂), 22f (1♀), 47h (1♀)
 1191 *Euophrys rufibarbis* (Simon, 1868) 8 (1♀)
 1192 *Euophrys sulphurea* (L. Koch, 1867) 29 (3♂)
 1193 *Evarcha arcuata* (Clerck, 1757) 14f (1♀), 14h (1♀ 1♂), 14j (1♀), 52c (2♀), 54, 88g
 1194 (1♂), 103r (1♀)
 1195 *Evarcha falcata* (Clerck, 1757) 83h (1♀ 1♂), 121b (2♀), 121d (1♀) **Figure 31B**
 1196 *Evarcha jucunda* (Lucas, 1846) (*Lucas, 1846*) 57 (1♂), 115b (1♀)
 1197 *Evarcha laetabunda* (C. L. Koch, 1846) 45c (1♂), 88g (2♂)

- 1198 *Habrocestum cf. ibericum* Dalmas, 1920 107a (1♂) **Figure 8C, 29C**
- 1199 The genus *Habrocestum* in the western Mediterranean is in urgent need of a modern revision.
- 1200 Most species are poorly known and rarely reported, several of them apparently being known
- 1201 only from the male type specimens (*H. algericum*, *H. ibericum*, *H. lepidum*); all of these
- 1202 might be junior synonyms of a very variable *H. bovaei* (Lucas, 1846), perhaps together with
- 1203 *H. pullatum* (known only from the female), *H. simoni* and *H. ornaticeps*. This synonymy
- 1204 seems to be implicit in Lecigne's (2012) report of *H. bovaei* from Malaga, referring to a
- 1205 specimen with a distinct prosomal pattern and clearly annulated legs, both in direct
- 1206 contradiction of the redescription of *H. bovaei* in Dalmas's (1920) revision of the genus, but
- 1207 in good agreement with, e.g., *H. ornaticeps* or *H. lepidum*. The present specimen is
- 1208 tentatively assigned to *H. ibericum* on the basis of the relative closeness to the type locality
- 1209 (Cartagena, on the south coast of Spain, less than 400 km east of Nerja), the illustrations of
- 1210 the pedipalp of the type provided by Prószyński (1987:fig. 29), mixed white and red hairs
- 1211 around the anterior eyes, and the extension of the white thoracic spot into two parallel bands
- 1212 up to the anterior median eyes ("tache thoracique prolongée jusqu'aux yeux médians par
- 1213 deux bandes blanches parallèles", Dalmas 1920:62). A similarly good match might be
- 1214 provided by *H. algericum*, but this species seems to be considerably darker, according to the
- 1215 original description.
- 1216
- 1217 *Heliophanus aeneus* (Hahn, 1832) 108 (1♀), 121f (1♂)
- 1218 *Heliophanus apiatus* Simon, 1868 107a (1♂)
- 1219 *Heliophanus cupreus* (Walckenaer, 1802) 72 (2♀), 84 (1♂), 96c (1♀), 108 (1♂), 113a
- 1220 (1♂), 113c (1♀ 1♂), 113d (1♀), 115a (1♂), 116d (1♂), 121b (1♀ 1♂), 121d (1♀), 121k (2♀
- 1221 2♂), 122a (1♀) **Figure 29D, E, 31C–E**
- 1222 *Heliophanus dubius* C. L. Koch, 1835 116f (1♀), 116m (1♀), 124 (1♀)
- 1223 *Heliophanus flavipes* (Hahn, 1832) 28a (2♀), 52a (2♀), 54 (2♂), 103s (2♀ 2♂), 116k (3♀
- 1224 1♂), 116o (1♂)
- 1225 *Heliophanus kochii* Simon, 1868 12e (1♂), 90b (1♂), 92 (2♀ 1♂), 107a (1♀), 113d (1♂),
- 1226 121k (1♂)
- 1227 *Heliophanus lineiventris* Simon, 1868 64 (1♀)
- 1228 *Heliophanus melinus* L. Koch, 1867 29 (2♂ 1 juv.), 59 (1♂)
- 1229 *Heliophanus patagiatus* Thorell, 1875 95 (1♀ 6♂), 103h (1♀) **Figure 29F**
- 1230 *Heliophanus tribulosus* Simon, 1868 22c (1♀ 1♂), 121k (2♀ 1♂) **Figure 29G, 31F**
- 1231 *Hypositticus pubescens* (Fabricius, 1775) 89 (1♂)
- 1232 *Iberattus semiglabratus* (Simon, 1868) 89 (1♀), 103n (1♀), 103r (2♀), 122a (1♂), 122b
- 1233 (1♂) **Figure 29H**
- 1234 *Icius hamatus* (C. L. Koch, 1846) 103e2 (2♀), 103f (1♂), 113c (3♀) **Figure 30A, 32A**
- 1235 The broad retrolateral tibial apophysis could suggest that the male specimen belongs to *Icius*
- 1236 *crassipes*; however, the long embolus, the locality in the very North of Spain, and the fact
- 1237 that unambiguous *I. hamatus* females were collected at the same site on the same day support
- 1238 the identification proposed here.
- 1239
- 1240 *Macaroeris nidicolens* (Walckenaer, 1802) 14d (1♂ 1 juv.), 103e (4♀ 4♂), 122a (1♀)
- 1241 **Figure 30B, 32B**

- 1242 *Marpissa muscosa* (Clerck, 1757) 47j (1 juv.)
- 1243 *Marpissa nivoyi* (Lucas, 1846) 12e (1♀), 39b (1♀), 88e (2♀ 1♂ 1 juv.)
- 1244 *Menemerus semilimbatus* (Hahn, 1829) 73 (1♀)
- 1245 *Neon rayi* (Simon, 1875) 88c (2♀), 88d (1♀)
- 1246 *Neon reticulatus* (Blackwall, 1853) 41 (1♀), 52c (1♀ 1♂), 83f (1♀), 83g (1♀), 113d (1♀)
- 1247 *Neon valentulus* Falconer, 1912 7b (2♂)
- 1248 *Pellenes geniculatus* (Simon, 1868) 95 (1♀ 1♂), 107b (1♂)
- 1249 *Philaeus chrysops* (Poda, 1761) 12d (1 juv.), 29 (1♀), 56 (1 juv.), 59 (1 juv.), 60 (1♂),
- 1250 71 (1♂), 113e (1♂)
- 1251 *Phlegra bresnieri* (Lucas, 1846) 29 (2♀ 3♂ 1 juv.), 81 (1♀)
- 1252 *Phlegra fasciata* (Hahn, 1826) 12c (1♀), 121k (1♀ 1♂)
- 1253 *Pseudeuophrys erratica* (Walckenaer, 1826) 83g (1♂), 116m (1♀) **Figure 32C**
- 1254 *Pseudeuophrys lanigera* (Simon, 1871) 12c (1♀ 1♂), 89 (1♀ 2♂), 116g (2♀) **Figure**
- 1255 **32D**
- 1256 *Pseudeuophrys obsoleta* (Simon, 1868) 62 (1♀)
- 1257 *Pseudomogus univittatus* (Simon, 1871) 28b (1♂)
- 1258 *Saitis barbipes* (Simon, 1868) 22a (2♀ 2♂), 22c (1♀ 1♂), 41 (1♂), 47d (2 juv.), 103r (1♀),
- 1259 120f (1♀)
- 1260 *Salticus confusus* Lucas, 1846 91a (1♀), 103e (1♀), 103e2 (1♂), 108 (1♀), 121j (2♂),
- 1261 121k (3♀ 2♂) **Figure 30C, 32E**
- 1262 *Salticus scenicus* (Clerck, 1757) 2 (1♂), 39b (1♂), 121k (1♂)
- 1263 *Synageles hilarulus* (C. L. Koch, 1846) 12e (2♂)
- 1264 *Talavera aequipes* (O. P.-Cambridge, 1871) 122b (1♀)
- 1265 *Talavera petrensis* (C. L. Koch, 1837) 12c (1♂), 16 (1♀), 40b (3♀ 5♂), 83c (1♀), 121j
- 1266 (1♀ 1♂), 121o (2♀)
- 1267
- 1268 **Scytodidae**
- 1269 *Scytodes thoracica* (Latreille, 1802) 47d (1♀ 1 juv.), 47h (1♀)
- 1270
- 1271 **Segestriidae**
- 1272 *Segestria senoculata* (Linnaeus, 1758) 12c (1♀ 1♂)
- 1273
- 1274 **Sicariidae**
- 1275 *Loxosceles rufescens* (Dufour, 1820) 90b (1♀), 92 (1♀)
- 1276
- 1277 **Sparassidae**
- 1278 *Micrommata formosa* Pavesi, 1878 90a (1♀), 107a (1♀) **Figure 33A NEW FOR SPAIN**
- 1279 The Iberian Peninsula appears to be a centre of radiation for the genus *Micrommata*. *M.*
- 1280 *formosa* is the only one of the five European species in this genus not previously reported
- 1281 from Spain. Unfortunately, the available figures for the females of several of the known
- 1282 species do not allow a confident discrimination from *M. formosa*, given the major
- 1283 ontogenetic variation of epigynal structures, and the genus appears in need of a thorough
- 1284 revision.
- 1285

- 1286 *Micrommata ligurina* (C. L. Koch, 1845) 7b (1♂)
- 1287 *Micrommata virescens* (Clerck, 1757) 121d (2♂), 121k (1♂) **Figure 33B, C**
- 1288
- 1289 **Synaphridae**
- 1290 *Cepheia longiseta* (Simon, 1881) 47h (1♂)
- 1291
- 1292 **Tetragnatidae**
- 1293 *Metellina mengei* (Blackwall, 1869) 14b (1♂), 52c (1♀), 113c (1♀), 118 (1♀)
- 1294 *Tetragnatha extensa* (Linnaeus, 1758) 14h (3♂), 14k (1♂), 88g (1♀ 1♂), 103c (1♀),
- 1295 116k (1♀ 1♂) **Figure 34A–D**
- 1296 The cleared chelicerae of both males and females reveal what appears are derivatives of the
- 1297 venom gland extending into the cheliceral teeth and ending at (openings on?) their tips. Could
- 1298 these be involved in gustatory courtship or the delivery of the sex-specific venom
- 1299 components identified by Binford et al. (2016) and Zobel-Thropp (2018) – or are they just
- 1300 artefacts of the preparation?
- 1301
- 1302 *Tetragnatha intermedia* Kulczyński, 1891 114 (1♀ 1♂) **Figure 34E**
- 1303 *Tetragnatha montana* Simon, 1874 2 (1♂), 14d (1♂), 14g (2♂)
- 1304 *Tetragnatha obtusa* C. L. Koch, 1837 14b (1♀)
- 1305
- 1306 **Theridiidae**
- 1307 *Achaeridion conigerum* (Simon, 1914) 84 (1♂) **NEW FOR SPAIN**
- 1308 *Anelosimus vittatus* (C. L. Koch, 1836) 14g (1♀), 14h (1♀), 14i (4♀), 14l (8♀ 3♂)
- 1309 *Asagena phalerata* (Panzer, 1801) 29 (1♂), 31 (2♀ 1 juv.), 41 (2 juv.), 58b (1♀), 89 (1♂),
- 1310 96c (1♀), 121g (2♀), 121j (1♀ 1♂)
- 1311 *Crustulina guttata* (Wider, 1834) 12c (1♂), 22a (4♀), 22e (3♀ 1♂), 22f (2♀), 39c (3♀
- 1312 2♂), 62 (1♀), 121f (1♀)
- 1313 *Crustulina sticta* (O. P.-Cambridge, 1861) 7a (1♀ 2♂), 7b (1♂), 49 (1♂), 58b (1♀)
- 1314 *Dipoena braccata* (C. L. Koch, 1841) 103e2 (1♂)
- 1315 *Dipoena melanogaster* (C. L. Koch, 1837) 113c (3♀ 1♂)
- 1316 *Enoplognatha afrodite* Hippha & Oksala, 1983 120a (1♂) **Figure 35A–C NEW**
- 1317 **FOR SPAIN**
- 1318 The pedipalps of the single male specimen are expanded and consequently difficult to match
- 1319 to the illustrations of *E. afrodite* in the literature. However, the details that are visible, in
- 1320 combination with the chelicerae and the habitus (which is similar to the *lineata* form of *E.*
- 1321 *ovata*), seem to be sufficiently diagnostic.
- 1322
- 1323 *Enoplognatha diversa* (Blackwall, 1859) 107a (1♀)
- 1324 *Enoplognatha franzi* Wunderlich, 1995 81 (2♀ 1♂), 107a (1♀ 1♂), 107b (1♀)
- 1325 **Figure 35D**
- 1326 *Enoplognatha oelandica* (Thorell, 1875) 22f (2♀)
- 1327 *Enoplognatha testacea* Simon, 1884 47d (1♀), 56 (2♀)
- 1328 *Enoplognatha thoracica* (Hahn, 1833) 22a (1♀), 22c (2♀), 22f (1♀), 121k (1♀)
- 1329 *Episinus truncatus* Latreille, 1809 22e (2 juv.), 54

- 1330 *Euryopis episinoides* (Walckenaer, 1847) 57 (1♂)
- 1331 *Euryopis margaritata* (L. Koch, 1867) 115b (2♂) **Figure 8D, 35E NEW FOR**
- 1332 **SPAIN**
- 1333 *Euryopis quinqueguttata* Thorell, 1875 22c (1♀)
- 1334 *Kochiura aulica* (C. L. Koch, 1838) 28a (1♀), 30 (1♂), 103f (1♂),
- 1335 *Lasaeola minutissima* Wunderlich, 2011 113c (1♂)
- 1336 *Lasaeola tristis* (Hahn, 1833) 91e (1♂)
- 1337 *Neottiura bimaculata* (Linnaeus, 1767) 22e (5♀), 54 (1♀), 113a (2♀ 1♂)
- 1338 *Neottiura suaveolens* (Simon, 1880) 22e (2♀), 104 (2 juv.)
- 1339 *Paidiscura pallens* (Blackwall, 1834) 14b (1♂), 116l (1♂), 116m (1♀)
- 1340 *Parasteatoda lunata* (Clerck, 1757) 2 (2♀), 14h (1♂)
- 1341 *Parasteatoda tepidariorum* (C. L. Koch, 1841) 10 (1♂ 2 juv.)
- 1342 *Pholcomma gibbum* (Westring, 1851) 97d (1♀)
- 1343 *Phycosoma inornatum* (O. P.-Cambridge, 1861) 12d (2♀ 3♂)
- 1344 *Phylloneta impressa* (L. Koch, 1881) 89 (1♀), 103e (1♂ 1 juv.), 103m (1♀)
- 1345 *Phylloneta sisyphia* (Clerck, 1757) 33 (1♀), 121b (1♀ 3♂) **Figure 35F**
- 1346 *Platnickina nigropunctata* (Lucas, 1846) 115a (1♀)
- 1347 *Platnickina tincta* (Walckenaer, 1802) 14d (1♂ 1 juv.), 14l (1♂), 103e2 (2♂), 121b
- 1348 (1♀)
- 1349 *Robertus arundineti* (O. P.-Cambridge, 1871) 120c (1♀)
- 1350 *Robertus lividus* (Blackwall, 1836) 34 (3♀), 69 (3♀)
- 1351 *Robertus mediterraneus* Eskov, 1987 83c (1♀), 83g (5♀), 122b (3♀) **Figure 36A**
- 1352 *Ruborridion musivum* (Simon, 1873) 113c (1♀)
- 1353 *Sardinidion blackwalli* (O. P.-Cambridge, 1871) 32 (1♂), 113c (1♂)
- 1354 *Simitidion simile* (C. L. Koch, 1836) 52a (1♂)
- 1355 *Steatoda albomaculata* (De Geer, 1778) 40b (1♀ 1♂ 1 juv.), 46 (1 juv.), 73 (2♀)
- 1356 *Steatoda grossa* (C. L. Koch, 1838) 90b (1♀), 107a (1♂ 1 juv.)
- 1357 *Steatoda paykulliana* (Walckenaer, 1806) 81 (1♀), 86 (1♀), 106 (1♀), 107a (1♀)
- 1358 *Theonoe minutissima* (O. P.-Cambridge, 1879) 52c (1♀ 1♂)
- 1359 *Theridion betteni* Wiehle, 1960 2 (2♀), 108 (1♀), 115a (4♀), 121g (1♀ 1♂)
- 1360 **Figure 35G, H, 36B (Breitling 2018:figure 2B) NEW FOR SPAIN**
- 1361 *Theridion harmsi* Wunderlich, 2011 113c (2♀ 1♂)
- 1362 *Theridion hannoniae* Denis, 1945 90a (1♂), 107b (1♂) **Figure 35I**
- 1363 *Theridion melanostictum* O. P.-Cambridge, 1876 86 (1♀)
- 1364 *Theridion melanurum* Hahn, 1831 3 (1♂), 45b (1♀)
- 1365 *Theridion mystaceum* L. Koch, 1870 22d (1♀), 116f (1♂), 121m (1♂) **Figure 35J**
- 1366 *Theridion petraeum* L. Koch, 1872 69 (2♀)
- 1367 *Theridion pictum* (Walckenaer, 1802) 124 (1♀)
- 1368 *Theridion varians* Hahn, 1833 14g (1♀ 1♂), 14h (1♂), 14i (1♂), 14l (1♂), 103e2 (1♀),
- 1369 121b (1♂), 122b (2♂)
- 1370 *Theridion wiehlei* Schenkel, 1938 107b (2♀) **Figure 36C**
- 1371 Identification of these specimens is based on comparison to the illustrations provided by
- 1372 Wiehle (1937) and drawings of a female collected by Simon in Algeria (provided by B.
- 1373 Thaler-Knoflach, **Figure 36D**). The internal genitalia of these females appear to be very

1374 similar to those described for *Theridion negebense* Levy & Amitai, 1982. Levy & Amitai
 1375 (1982) seem to have been unaware of the existence of *T. wiehlei* when they diagnosed the
 1376 new species as separated “easily from all other *Theridion* species”; it is thus quite possible
 1377 that *T. negebense* will turn out to be a junior synonym of *T. wiehlei*. The record of *T.*
 1378 *negebense* from Cadiz, Spain, reported by Vanuytven et al. (1994), and the one from Almería
 1379 mentioned by Barrientos et al. (2017), are both based on single females and with high
 1380 probability refer to *T. wiehlei*, which was originally described from southern Spain. *T.*
 1381 *negebense* thus should be deleted from the European species list. The male of *T. wiehlei* is
 1382 not known with certainty: when Schenkel described the species, he apparently only had a
 1383 single female specimen available (the holotype illustrated by Deltshv 1992). For the male,
 1384 Schenkel referred to Wiehle (1937), who together with a female of *T. wiehlei* had illustrated a
 1385 male collected by L. Koch in Eltersdorf, Germany, both as *Theridion petraeum*. However,
 1386 while Koch (1877) reports collecting mature males and females, Wiehle’s text makes it clear
 1387 that the part of Koch’s material available to him contained mature males only. It is not clear
 1388 where the female of *T. wiehlei*, which Wiehle illustrated as *T. petraeum*, came from, as he
 1389 later states that he only had Koch’s material at this point (Wiehle 1960b), but it is interesting
 1390 that in May 1930 Wiehle had been on a collection trip around Granada, quite close to the type
 1391 locality of *T. wiehlei*. There is currently no reason to assume that the male and female
 1392 illustrated by Wiehle are conspecific, and later reports of male *T. wiehlei* (e.g., by Denis
 1393 1945) also refer to specimens collected without accompanying females. In fact, on
 1394 zoogeographic grounds, it seems much more likely that the Eltersdorf male illustrated by
 1395 Wiehle, as well as the males illustrated by Denis (1945) from France and by Tyshchenko
 1396 (1971) from Russia, actually refer to *T. cinereum*, the palp of which matches that illustrated
 1397 by Wiehle so closely that specimens from the Alps were originally misidentified as *T. wiehlei*
 1398 (Thaler 1981). True *T. wiehlei* seems, therefore, to be restricted to the very South of Spain
 1399 and North Africa, possibly extending east to Israel.

1400

1401 **Thomisidae**

- 1402 *Cozyptila blackwalli* (Simon, 1875) 47c (2♀ 1 juv.), 122d (1♀)
 1403 *Diaea dorsata* (Fabricius, 1777) 116j (1♀), 121b (1♀)
 1404 *Ebrechtella tricuspidata* (Fabricius, 1775) 14b (1♂), 14f (3♂), 14i (1♀), 14j (1♂), 76 (1♀),
 1405 78 (1♂), 141 (2♂)
 1406 *Heriaeus oblongus* Simon, 1918 122a (1♂)
 1407 *Heriaeus simoni* Kulczyński, 1903 59 (1♂) (Breitling 2018:figure 2M)
 1408 *Misumena vatia* (Clerck, 1757) 14f (2♂), 14h (1♂), 14i (1♀), 71 (1♀), 78 (1♀), 83h
 1409 (1♀), 108 (2♂), 121b (2♀), 121k (1♀) **Figure 37A, B**
 1410 *Monaeses paradoxus* (Lucas, 1846) 107a (1♀)
 1411 *Ozyptila atomaria* (Panzer, 1801) 40b (1♀), 96c (1♀ 2♂)
 1412 *Ozyptila confluens* (C. L. Koch, 1845) 66 (1♂)
 1413 *Ozyptila furcula* L. Koch, 1882 7a (1♂), 7b (1♂)
 1414 *Ozyptila rauda* Simon, 1875 69 (2♀ 1♂)
 1415 *Pistius truncatus* (Pallas, 1772) 72 (1♂), 103i (2 juv.)
 1416 *Runcinia grammica* (C. L. Koch, 1837) 57 (1♂), 61 (1♂)

- 1417 *Synema globosum* (Fabricius, 1775) 14g (1♀ 1♂), 14i (2 juv.), 59 (1 juv.), 88g (1♀), 103f
 1418 (2♀ 1♂), 115a (1♀ 4 juv.), 122a (1♂)
 1419 *Thomisus onustus* Walckenaer, 1805 12b (1♀), 37 (1♀), 54 (2♀ 4♂), 59 (1♂), 76 (1♀ 1♂),
 1420 115a (1♂) **Figure 37C**
 1421 *Tmarus punctatissimus* (Simon, 1870) 103f (1♂) **Figure 37D, E**
 1422 *Tmarus stellio* Simon, 1875 116c (1♀ 1♂) **Figure 8E, 37F, G**
 1423 *Xysticus audax* (Schrank, 1803) 94 (1♂), 103e2 (1♂), 108 (3♂)
 1424 *Xysticus cor* Canestrini, 1873 47b (1♂), 47d (1♂), 47f (1♂)
 1425 *Xysticus cristatus* (Clerck, 1757) 40a (1♂), 54 (4♀), 83c (1♀)
 1426 *Xysticus desidiosus* Simon, 1875 31 (2♀)
 1427 *Xysticus erraticus* (Blackwall, 1834) 12c (1♂), 12e (1♂ 3 juv.), 40a (1♂), 54 (1♂), 62 (1♂)
 1428 *Xysticus gallicus* Simon, 1875 62 (1♀ 1♂), 80 (1♀)
 1429 *Xysticus ibex* Simon, 1875 98 (1♂) (Breitling 2018:figure 2P)
 1430 *Xysticus kempeleni* Thorell, 1872 14c (1♂), 103e2 (1♀), 121k (1♂) **Figure 37H**
 1431 *Xysticus kochi* Thorell, 1872 14h (1♀), 29 (1♂), 40a (1♂), 77 (1♂)
 1432 *Xysticus lanio* C. L. Koch, 1835 97d (1♀), 121b (1♀), 121d (1♂)
 1433 *Xysticus macedonicus* Šilhavý, 1944 72 (1♂) (Breitling 2018:figure 2E)
 1434 *Xysticus ninnii* Thorell, 1872 22c (1♀), 43 (1♂)
 1435 *Xysticus nubilus* Simon, 1875 101 (3♂) (Breitling 2018:figure 2Q)
 1436 *Xysticus thessalicoides* Wunderlich, 1995 61 (1♀)
 1437 *Xysticus* cf. *fienae* (Jocqué, 1993) 107a (1♀)
 1438 This could also be *X. tristrami* (O. P.-Cambridge, 1872), the known published distribution of
 1439 which is restricted to the eastern Mediterranean, while *X. fienae* was originally described
 1440 from the south coast of Spain. Based on the descriptions and few illustrations in the literature
 1441 (e.g. Jocqué 1993:fig. 1-3, Kiany et al. 2017:fig. 14, Kulczyński 1911: figs. 31, 34 and 35,
 1442 Lecigne 2016:figs. 11E and F, Levy 1976:figs. 9-12, and Marusik & Logunov 1995:figs. 52–
 1443 54), I am unable to confidently distinguish the two species. The decision whether we are
 1444 dealing with two vicariant sister species or with a single widespread species will require
 1445 examination of a larger amount of material.
 1446
 1447 *Xysticus ulmi* (Hahn, 1831) 14e (1♂), 14g (1♀), 14h (2♀)
 1448
 1449 **Titanoecidae**
 1450 *Titanoeca monticola* (Simon, 1870) 113a (2♂) **Figure 38**
 1451 *Titanoeca quadriguttata* (Hahn, 1833) 11 (2 juv.), 19 (1 juv.), 22d (1♂),
 1452
 1453 **Uloboridae**
 1454 *Hyptiotes flavidus* (Blackwall, 1862) 88b (1♀), 88c (1♀), 88f (1♂) **Figure 39A, B**
 1455 *Uloborus plumipes* Lucas, 1846 107a (2♀)
 1456 *Uloborus walckenaerius* Latreille, 1806 22c (1♀)
 1457
 1458 **Zodariidae**
 1459 *Zodarion frenatum* Simon, 1884 58b (1♀ 2♂)
 1460 *Zodarion fuscum* (Simon, 1870) 89 (1♂) **Figure 40A**

- 1461 *Zodarion italicum* (Canestrini, 1868) 22a (1♂)
 1462 *Zodarion marginiceps* Simon, 1914 110b (1♀)
 1463 *Zodarion morosum* Denis, 1935 61 (1♀ 1♂)
 1464 *Zodarion rubidum* Simon, 1914 22c (1♀ 1♂), 22e (3♀ 1♂), 28a (2♀ 3♂)
 1465 *Zodarion rudyi* Bosmans, 1994 104 (1♂) **Figure 40B**

1466

1467 **Zoropsidae**

- 1468 *Zoropsis media* Simon, 1878 47c (1♀), 47h (1♀ 1♂)
 1469 *Zoropsis spinimana* (Dufour, 1820) 47a (1♀)

1470

1471

1472 **Conclusions**

1473 The European material in the Duffey collection is interesting for a number of reasons. On the
 1474 one hand, it illustrates the enormous progress made in the tools available for spider
 1475 identification since the days his collection was assembled. While it previously would have
 1476 been almost impossible to identify a good fraction of the specimens without recourse to
 1477 reference material, the availability of the image collections of the Spiders of Europe keys and
 1478 Pierre Oger's photographic documentation, as well as their tight integration with the World
 1479 Spider Catalog for additional bibliographic references and immediate access to the entire
 1480 relevant literature, mean that the identification work for South European spiders is now
 1481 almost as easy as for material from Central and Northwestern Europe. On the other hand, the
 1482 presence of a handful of unidentified specimens, possibly new species, 14 potentially new
 1483 country records for (mainland) Spain, and numerous problematic cases for which only
 1484 tentative identifications could be proposed, demonstrate the need for further faunistic
 1485 exploration and taxonomic clarification. In several cases, only the availability of recent
 1486 revisionary studies of difficult groups allowed the confident identification of Duffey's
 1487 material. The importance of amateur collections in contributing to future advances in this
 1488 direction cannot be overstated, and their deposition in museum collections for permanent safe
 1489 keeping is strongly encouraged.

1490

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1498

1499 **References**

- 1500 Bacelar A (1936) Notas aracnológicas. III. Aranhas ibéricas da familia Eresidae. Boletim da
1501 Sociedade Portuguesa de Ciencias Naturais 12:179–183.
- 1502 Barrientos JA, Uribarri I & García-Sarrión R (2015) Arañas (Arachnida, Araneae) del Turó
1503 de l'Home (Parc Natural del Montseny, Cataluña, España). Revista Ibérica de Aracnología
1504 27: 61-74.
- 1505 Benoit PLG (1974) Araignées intéressantes du Muséum d'Histoire Naturelle de Genève.
1506 Revue Suisse de Zoologie 81:993–998.
- 1507 Bidegaray-Batista L, Sánchez-Gracia A, Santulli G, Maiorano L, Guisan A, Vogler AP &
1508 Arnedo MA (2016) Imprints of multiple glacial refugia in the Pyrenees revealed by
1509 phylogeography and palaeodistribution modelling of an endemic spider. Molecular Ecology
1510 25(9):2046–2064.
- 1511 Binford GJ, Gillespie RG, Maddison WP (2016) Sexual dimorphism in venom chemistry in
1512 *Tetragnatha* spiders is not easily explained by adult niche differences. Toxicon 114:45–52.
1513 doi: 10.1016/j.toxicon.2016.02.015.
- 1514 Bolzern A, Burckhardt D, Hänggi A (2013) Phylogeny and taxonomy of European funnel-
1515 web spiders of the *Tegenaria-Malthonica* complex (Araneae: Agelenidae) based upon
1516 morphological and molecular data. Zool J Linn Soc 168:723–848
- 1517 Bosmans R, Kherbouche-Abrous O, Benhalima S & Hervé C (2018) The genus *Haplodrassus*
1518 Chamberlin, 1922 in the Mediterranean and the Maghreb in particular (Araneae:
1519 Gnaphosidae). Zootaxa 4451(1):1–67. doi:10.11646/zootaxa.4451.1.1
- 1520 Bosmans R, Hernández-Corral J & Lissner J (2019) Description of a new *Canariphantes*
1521 species from the Balearic Islands (Araneae: Linyphiidae). Arachnology 18(2): 97–100.
1522 doi:10.13156/arac.2018.18.2.97
- 1523 Branco V V (2019) An update to the Iberian spider checklist (Araneae). Zootaxa 4614:201–
1524 254. doi: 10.11646/zootaxa.4614.2.1
- 1525 Brignoli P M (1978) Quelques notes sur les Agelenidae, Hahniidae, Oxyopidae et Pisauridae
1526 de France et d'Espagne (Araneae). Revue suisse Zool 85:265–294
- 1527 Crespo LC, Domènech M, Enguídanos A, Malumbres-Olarte J, Cardoso P, Moya-Laraño J,
1528 Frías-López C, Macías-Hernández N, De Mas E, Mazzuca P, Mora E, Opatova V, Planas E,
1529 Ribera C, Roca-Cusachs M, Ruiz D, Sousa P, Tonzo V, Arnedo MA (2018) A DNA barcode-
1530 assisted annotated checklist of the spider (Arachnida, Araneae) communities associated to
1531 white oak woodlands in Spanish National Parks. Biodiversity Data Journal 6(e29443):1–459
- 1532 Dalmas R de (1920) Liste d'araignées de Boudron en Asie Mineure suivie d'une étude des
1533 espèces méditerranéennes du genre *Habrocestum*. Annali del Museo Civico di Storia
1534 Naturale di Genova 50:57–69.

- 1535 Deltshv CD (1992) A critical review of family Theridiidae (Araneae) in Bulgaria. Acta
1536 Zoologica Bulgarica 43: 13-21.
- 1537 Denis J (1934) Sur quelques araignées des Pyrenees-Orientales. Bulletin de la Société
1538 Entomologique de France 39: 72-77.
- 1539 Denis J (1945) Sur quelques *Theridion* appartenant à la faune de France. Bulletin de la
1540 Société Entomologique de France 49(1944): 111-117.
- 1541 Denis J (1965) Notes sur les érigonides. XXVIII Le genre *Trichoncus* (Araneae). Annales de
1542 la Société Entomologique de France (N.S.) 1: 425-477.
- 1543 Duffey E & Brignoli PM (1981) Two rare spiders from the Spanish Pyrenees (prov. Huesca).
1544 Bulletin of the British Arachnological Society 5:155–158.
- 1545 Foord SH (2008) Cladistic analysis of the Afrotropical Hersiliidae (Arachnida, Araneae) with
1546 the first records of *Murrícia* and the description of a new genus from Madagascar. Journal of
1547 Afrotropical Zoology 4:111–142.
- 1548 Foord SH & Dippenaar-Schoeman AS (2005) A revision of the Afrotropical species of
1549 *Hersiliola* Thorell and *Tama* Simon with the description of a new genus *Tyrotama* (Araneae:
1550 Hersiliidae). African Entomology 13:255–279.
- 1551 Grimm U (1985) Die Gnaphosidae Mitteleuropas (Arachnida, Araneae). Abhandlungen des
1552 Naturwissenschaftlichen Vereins in Hamburg 26: 1-318.
- 1553 Hansen H (1995) Über die Arachniden-Fauna von urbanen Lebensräumen in Venedig - III.
1554 Die epigäischen Spinnen eines Stadtparkes (Arachnida: Araneae). Bollettino del Museo
1555 Civico di Storia Naturale di Venezia 44(for 1993): 7-36.
- 1556 Isaia M, Paschetta M, Chiarle A (2015) Annotated checklist of the spiders (Arachnida,
1557 Araneae) of the Site of Community Importance and Special Area of Conservation “Alpi
1558 Marittime” (NW Italy), IN: Daugeron, C., Deharveng, L., Isaia, M., Villemant, C. & Judson,
1559 M. (eds), Mercantour/Alpi Marittime All Taxa Biodiversity Inventory. Zoosystema,
1560 37(1):57–114. <https://doi.org/10.5252/z2015n1a4>
- 1561 Jocqué R (1993) A new species of *Coriarachne* from Spain (Araneae, Thomisidae). Bulletin
1562 de l’Institut Royal des Sciences Naturelles de Belgique (Ent.) 63:119–122.
- 1563 Kiany N, Sadeghi S, Kiany M, Zamani A & Ostovani S (2017) Additions to the crab spider
1564 fauna of Iran (Araneae: Thomisidae). Arachnologische Mitteilungen 53:1–8.
1565 doi:10.5431/aramit5301
- 1566 Koch L (1877) Verzeichniss der bei Nürnberg bis jetzt beobachteten Arachniden (mit
1567 Ausschluss der Ixodiden und Acariden) und Beschreibungen von neuen, hier vorkommenden
1568 Arten. Abhandlungen der Naturhistorischen Gesellschaft zu Nürnberg 6: 113-198.

- 1569 Kulczyński V (1911) Fragmenta Arachnologica, IX. Bulletin International de l'Académie des
1570 Sciences de Cracovie 1911:12–75.
- 1571 Lecigne S (2012) Inventaire aranéologique (Arachnida, Araneae) dans la ville d'Estepona
1572 (Malaga, Espagne). Revista Ibérica de Aracnología 21:161–167.
- 1573 Lecigne S (2016) Contribution à la connaissance de l'aranéofaune (Araneae) de Crète (Grèce)
1574 et description de la femelle inconnue de *Neaetha absheronica* Logunov & Guseinov, 2002
1575 (Salticidae). Nieuwsbrief van de Belgische Arachnologische Vereniging 30(3):95–118.
- 1576 Lecigne S, Cornic J-F, Oger P & Van Keer J (2019) *Celerrimus* n. gen. (Araneae,
1577 Philodromidae) et description de *Celerrimus duffeyi* n. sp., une espèce très singulière
1578 d'Europe occidentale. Revue Arachnologique (2) 6: 32–51.
- 1579 Lemke M, E Merches & A Hänggi (2014) Neue Arbeitsgruppe der Arachnologischen
1580 Gesellschaft (AraGes) mit Erweiterung der Webpräsenz: Arachniden-Wiki und -Forum.
1581 Arachnologische Mitteilungen 48:8–9.
- 1582 Le Peru B (2011) The spiders of Europe, a synthesis of data: Volume 1 Atypidae to
1583 Theridiidae. Mémoires de la Société Linnéenne de Lyon 2:1–522.
- 1584 Levy G (1976) The spider genus *Xysticus* (Araneae: Thomisidae) in Israel. Israel Journal of
1585 Zoology 25:1–37.
- 1586 Levy G (2003) Spiders of the families Anyphaenidae, Hahniidae, Ctenidae, Zoridae, and
1587 Hersiliidae (Araneae) from Israel. Israel Journal of Zoology 49:1–31.
- 1588 Machado A de B (1941) Araignées nouvelles pour la faune portugaise (II). Memorias e
1589 Estudos do Museu Zoológico da Universidade de Coimbra 117:i–xvi, 1–60.
- 1590 Marusik YM & Logunov DV (1995) The crab spiders of Middle Asia (Aranei, Thomisidae),
1591 2. Beiträge zur Araneologie 4:133–175.
- 1592 Marusik YM & Fet V (2009) A survey of east Palearctic *Hersiliola* Thorell, 1870 (Araneae,
1593 Hersiliidae), with a description of three new genera. ZooKeys 16:75–114.
1594 doi:10.3897/zookeys.16.229
- 1595 Muff P, Schmidt MH, Frick H, Nentwig W & Kropf C (2007) Spider (Arachnida: Araneae)
1596 distribution across the timberline in the Swiss Central Alps (Alp Flix, Grisons) and three
1597 morphologically variable species. Arachnologische Mitteilungen 34: 16-24.
- 1598 Paschetta M, La Morgia V, Masante D, Negro M, Rolando A, & Isaia M (2013) Grazing
1599 history influences biodiversity: a case study on ground-dwelling arachnids (Arachnida:
1600 Araneae, Opiliones) in the Natural Park of Alpi Marittime (NW Italy). Journal of Insect
1601 Conservation 17(2): 339–356.
- 1602 Prószyński J (1987). Atlas rysunków diagnostycznych mniej znanych Salticidae 2. Zeszyty
1603 Naukowe Wyższej Szkoły Rolniczo-Pedagogicznej, Siedlce, 172 pp.

- 1604 Řezáč M, Pekár S & Johannesen J (2008) Taxonomic review and phylogenetic analysis of
1605 central European *Eresus* species (Araneae: Eresidae). *Zoologica Scripta* 37(3):263–287.
1606 doi:10.1111/j.1463-6409.2008.00328.x
- 1607 Ribera C, Ferrández MÁ & Pérez JA (1988) Los hersílicos (Araneae, Hersiliidae) de la fauna
1608 Ibérica. *Miscellanea Zoologica* 10:97–103.
- 1609 Schenkel E (1938) Spinnentiere von der Iberischen Halbinsel, gesammelt von Prof. Dr O.
1610 Lundblad, 1935. *Arkiv för Zoologi* 30(A24): 1-29.
- 1611 Thaler K (1981) Bemerkenswerte Spinnenfunde in Nordtirol (Österreich).
1612 Veröffentlichungen des Museum Ferdinandeum in Innsbruck 61: 105-150.
- 1613 Tuneva TK & Esyunin SL (2003) A review of the family Gnaphosidae in the fauna of the
1614 Urals (Aranei), 4. The first record of *Gnaphosa tigrina* Simon, 1878 and remarks on two
1615 species from the *rufula* group. *Arthropoda Selecta* 11: 277-281.
- 1616 Tyschchenko VP (1971) *Opredelitel' paukov evropejskoj chasti SSSR*. Leningrad, pp. 1-281.
- 1617 Vanuytven H, Van Keer J & Poot P (1994) Kogelspinnen verzameld in Zuid-Europa door P.
1618 Poot (Araneae, Theridiidae). *Nieuwsbrief van de Belgische Arachnologische Vereniging* 9: 1-
1619 19.
- 1620 Wiehle H (1933) *Holocnemus hispanicus* sp. n. und die Gattungen *Holocnemus* Simon und
1621 *Crossoprisa* Simon. *Zoologischer Anzeiger* 104: 241-252.
- 1622 Wiehle H (1937) Spinnentiere oder Arachnoidea. 26. Familie. Theridiidae oder
1623 Haubennetzspinnen (Kugelspinnen). *Die Tierwelt Deutschlands* 33: 119-222.
- 1624 Wiehle H (1960a) Der Embolus des männlichen Spinnentasters. *Verhandlungen der*
1625 *Deutschen Zoologischen Gesellschaft* 1960:457–480.
- 1626 Wiehle H (1960b) Beiträge zur Kenntnis der deutschen Spinnenfauna. *Zoologische*
1627 *Jahrbücher, Abteilung für Systematik, Geographie und Biologie der Tiere* 88: 195-254.
- 1628 World Spider Catalog (2019) World Spider Catalog. Version 19.5. Natural History Museum
1629 Bern, online at <http://wsc.nmbe.ch>, accessed on 01 April 2019. doi: 10.24436/2
- 1630 Wunderlich J (2011) Extant and fossil spiders (Araneae). *Beiträge zur Araneologie* 6: 1-640.
- 1631 Zobel-Thropp PA, Bulger EA, Cordes MHJ, Binford GJ, Gillespie RG, Brewer MS (2018)
1632 Sexually dimorphic venom proteins in long-jawed orb-weaving spiders (*Tetragnatha*)
1633 comprise novel gene families. *PeerJ*. 6:e4691. doi: 10.7717/peerj.4691

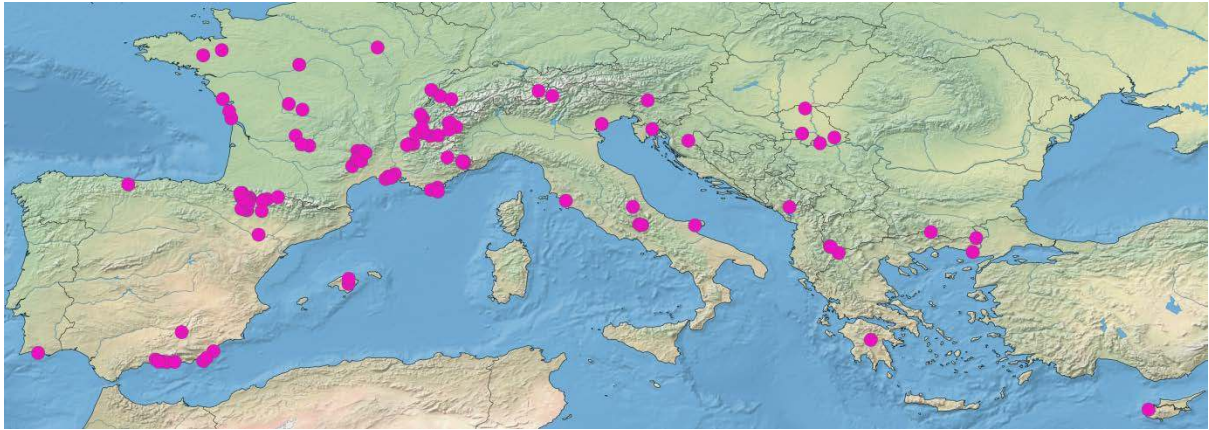


Figure 1. Overview of the South European sampling locations represented in the previously unidentified material of the Duffey collection in the Manchester Museum.

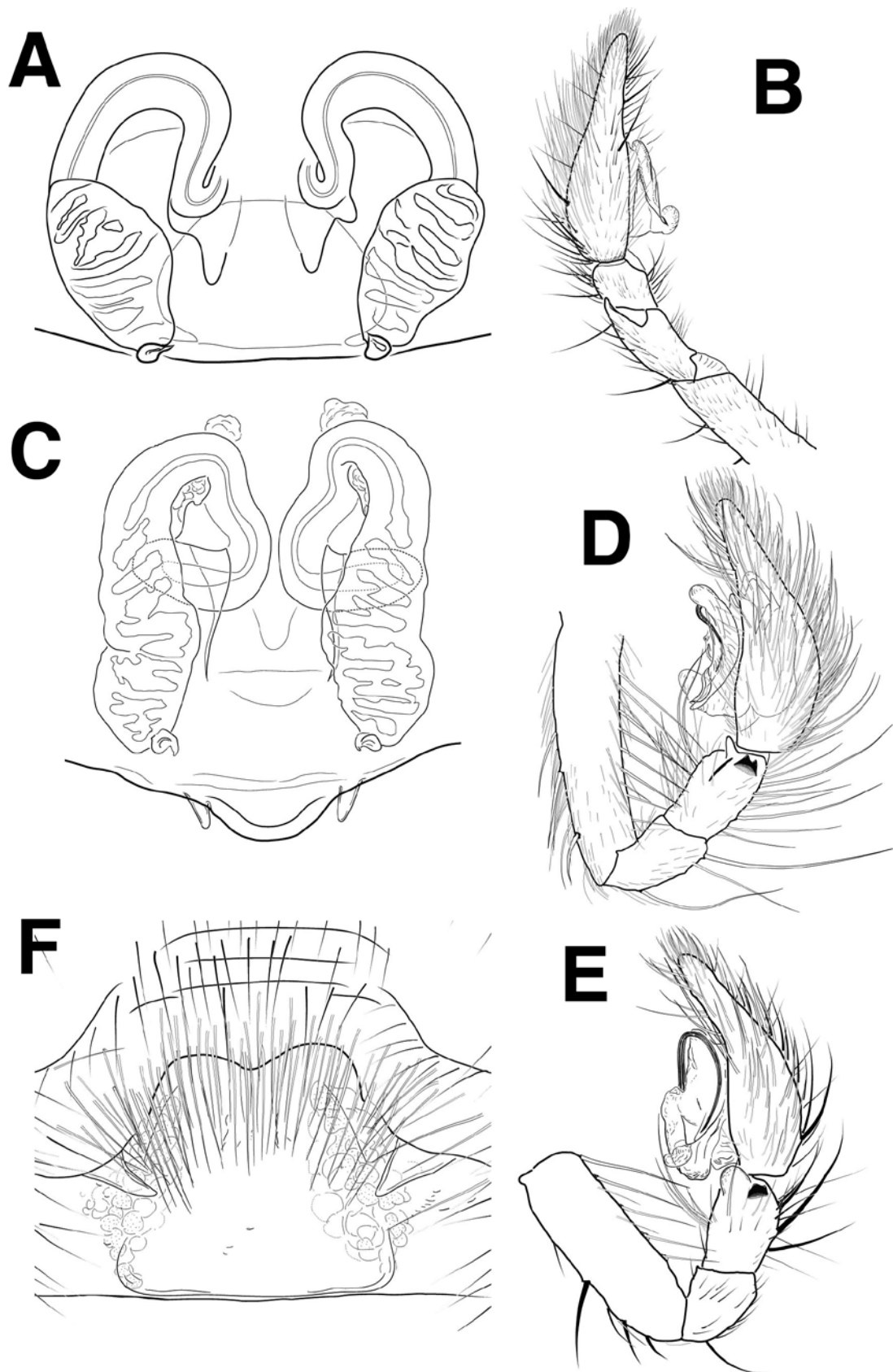


Figure 2. Agelenidae. **A** *Eratigena bucculenta*, vulva. **B** *Eratigena feminea* pedipalp, retrolateral. **C, D** *Eratigena fuesslini* vulva (C) and pedipalp, retrolateral (D). **E** *Malthonica lusitanica* pedipalp, retrolateral. **F** *Pireneitega segestriformis* epigynum.



Figure 3. Anyphaenidae. *Anyphaena sabina* vulva.

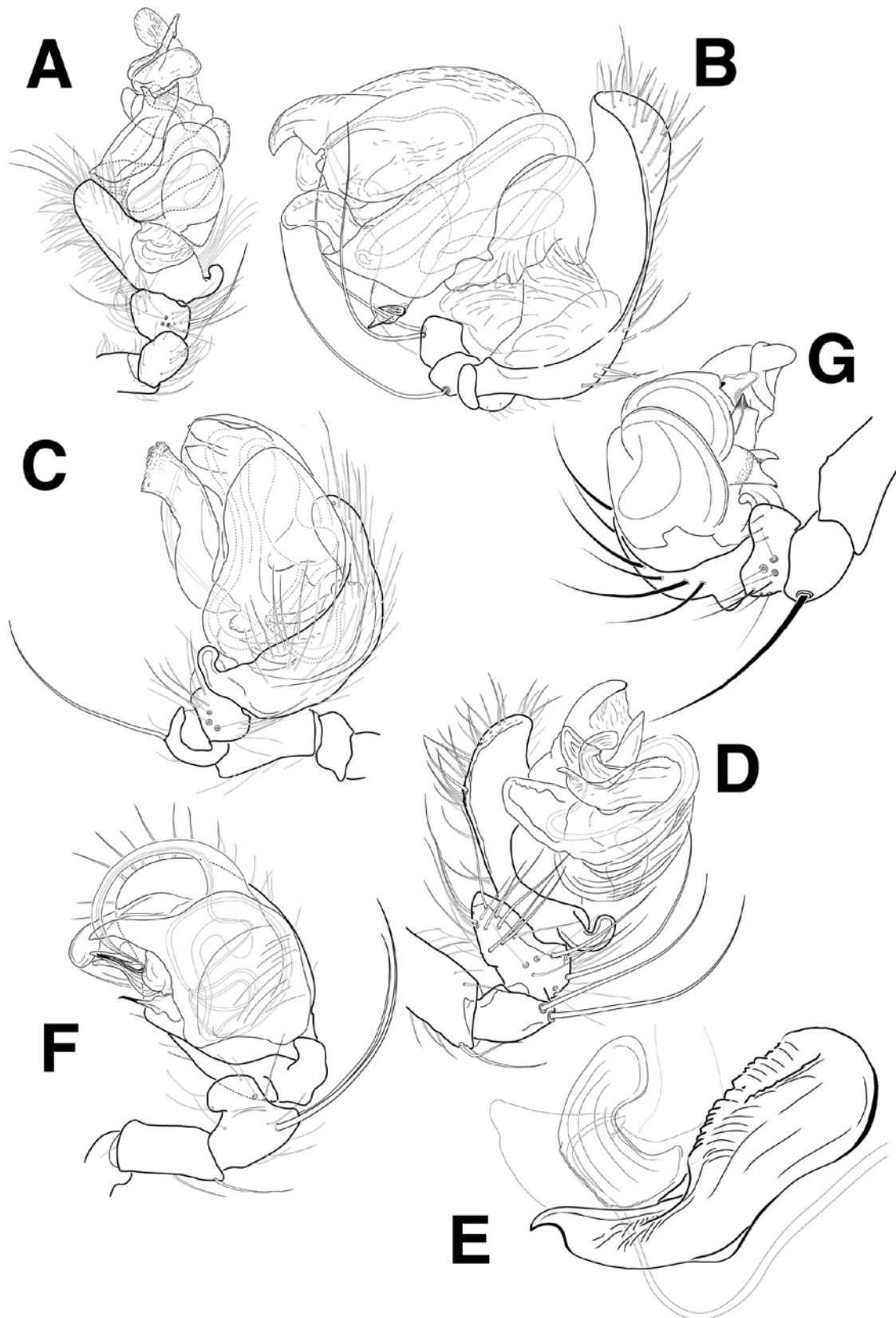


Figure 4. Araneidae males. **A** *Araneus quadratus* pedipalp, expanded. **B** *Araneus sturmi* pedipalp, slightly expanded. **C** *Cyclosa conica* pedipalp. **D, E** *Gibbaranea gibbosa* pedipalp, slightly expanded (D) and median apophysis (E). **F** *Hypsosinga sanguinea* pedipalp. **G** *Mangora acalypha* pedipalp.

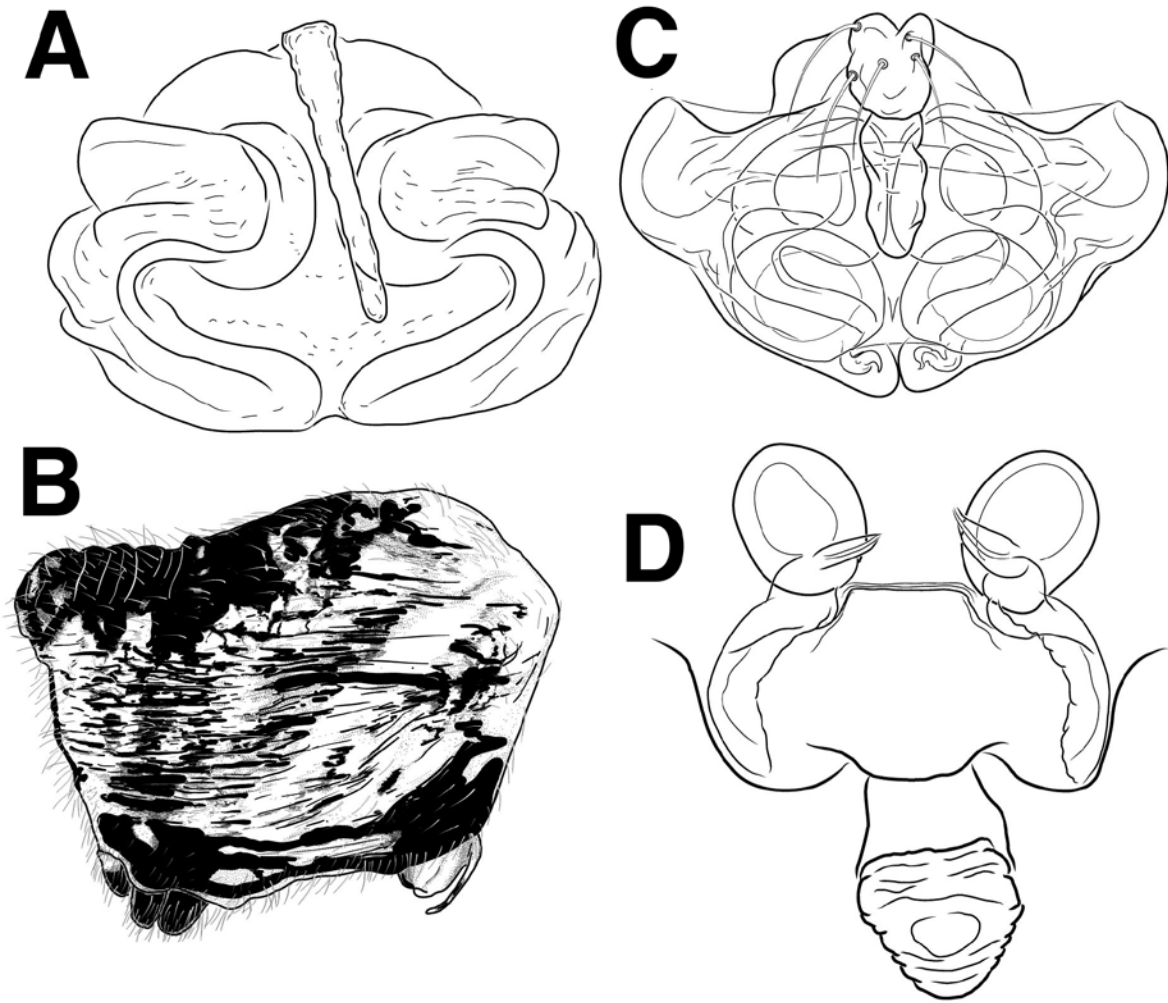


Figure 5. Araneidae females. **A, B** *Cyclosa algerica* epigynum (A) and habitus (B). **C** *Cyclosa conica* epigynum. **D** *Mangora acalypha* epigynum.

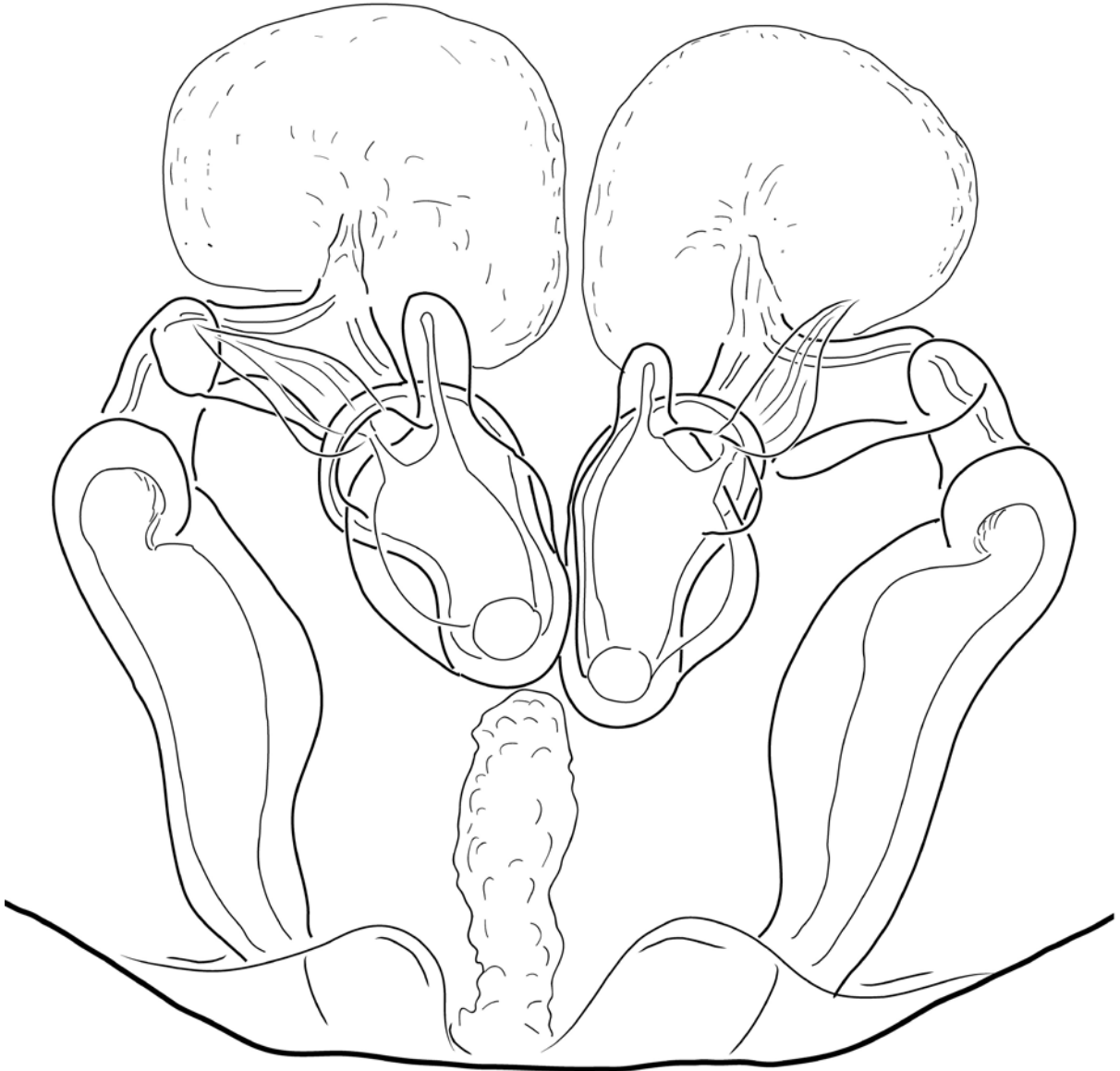


Figure 6. Clubionidae. *Clubiona terrestris* vulva.

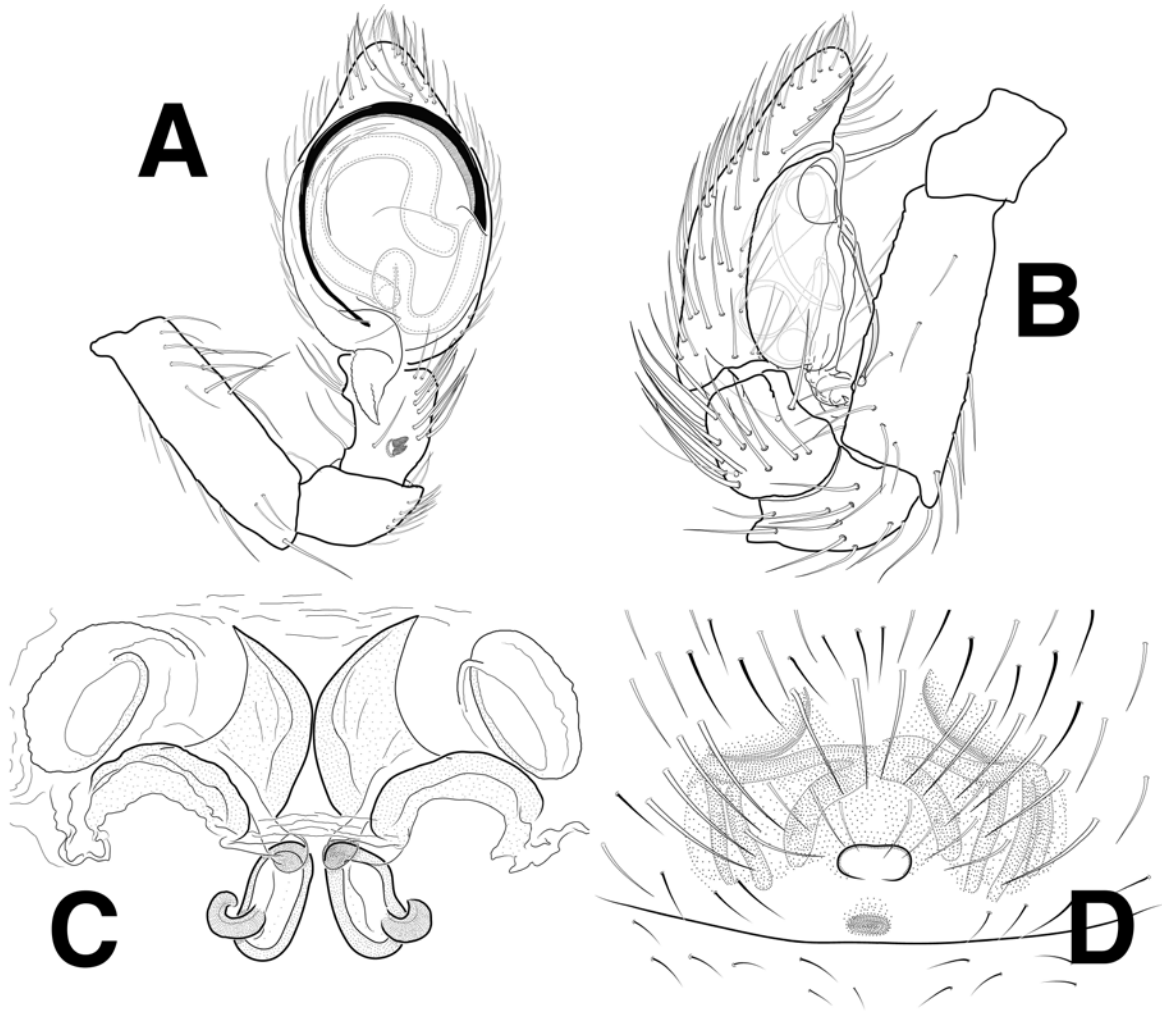


Figure 7. Dictynidae. **A** *Brigittea latens* pedipalp, ventral. **B** *Nigma gratiosa* pedipalp, retrolateral. **C** *Nigma puella* vulva. **D** *(Scoto)Lathys* sp. epigynum.

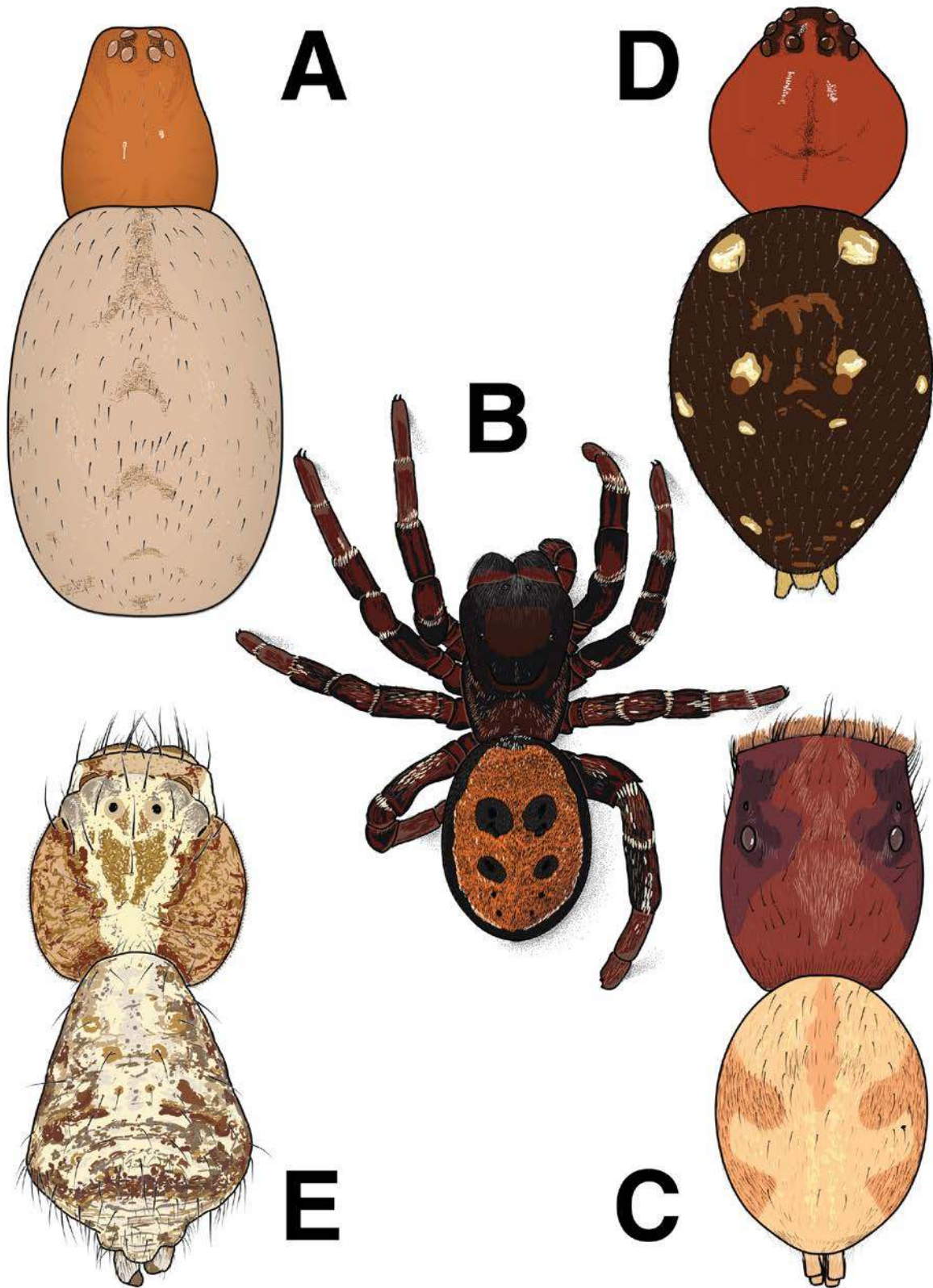


Figure 8. Habitus drawings. **A** *(Scoto)Lathys* sp. female. **B** *Eresus* cf. *solitarius* male. **C** *Habrocestum* cf. *ibericum* male. **D** *Euryopsis margaritata* male. **E** *Tmarus stellio* female.

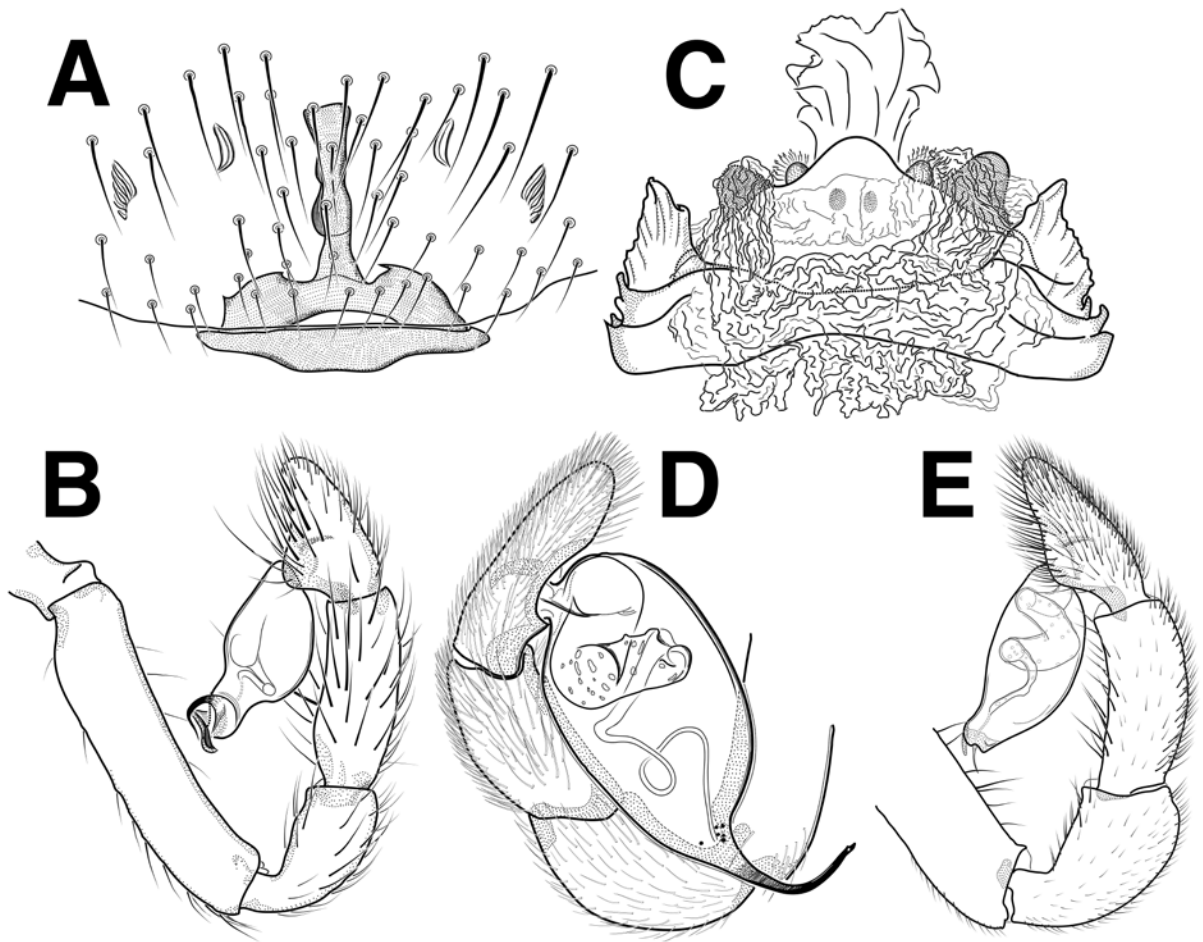


Figure 9. Dysderidae. **A, B** *Harpactea hombergi* endogynum, ventral (A) and pedipalp (B). **C, D** *Harpactocrates ravastellus* endogynum, dorsal (C) and pedipalp (D). **E** *Parachtes teruelis* pedipalp.

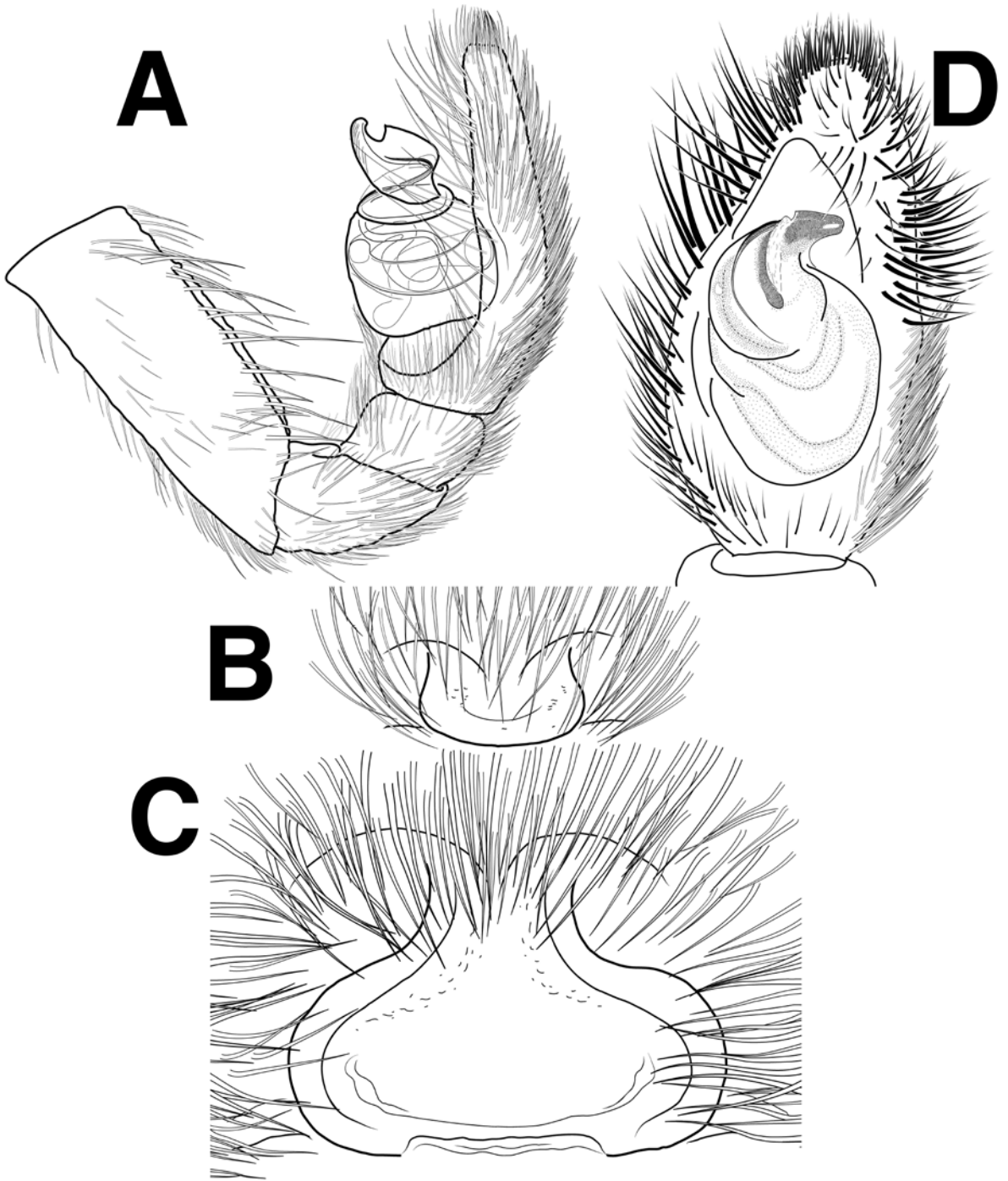


Figure 10. Eresidae. **A** *Eresus* cf. *solitarius* pedipalp. **B–D** *Stegodyphus lineatus* pre-epigynum (B), epigynum (C) and pedipalp (D).

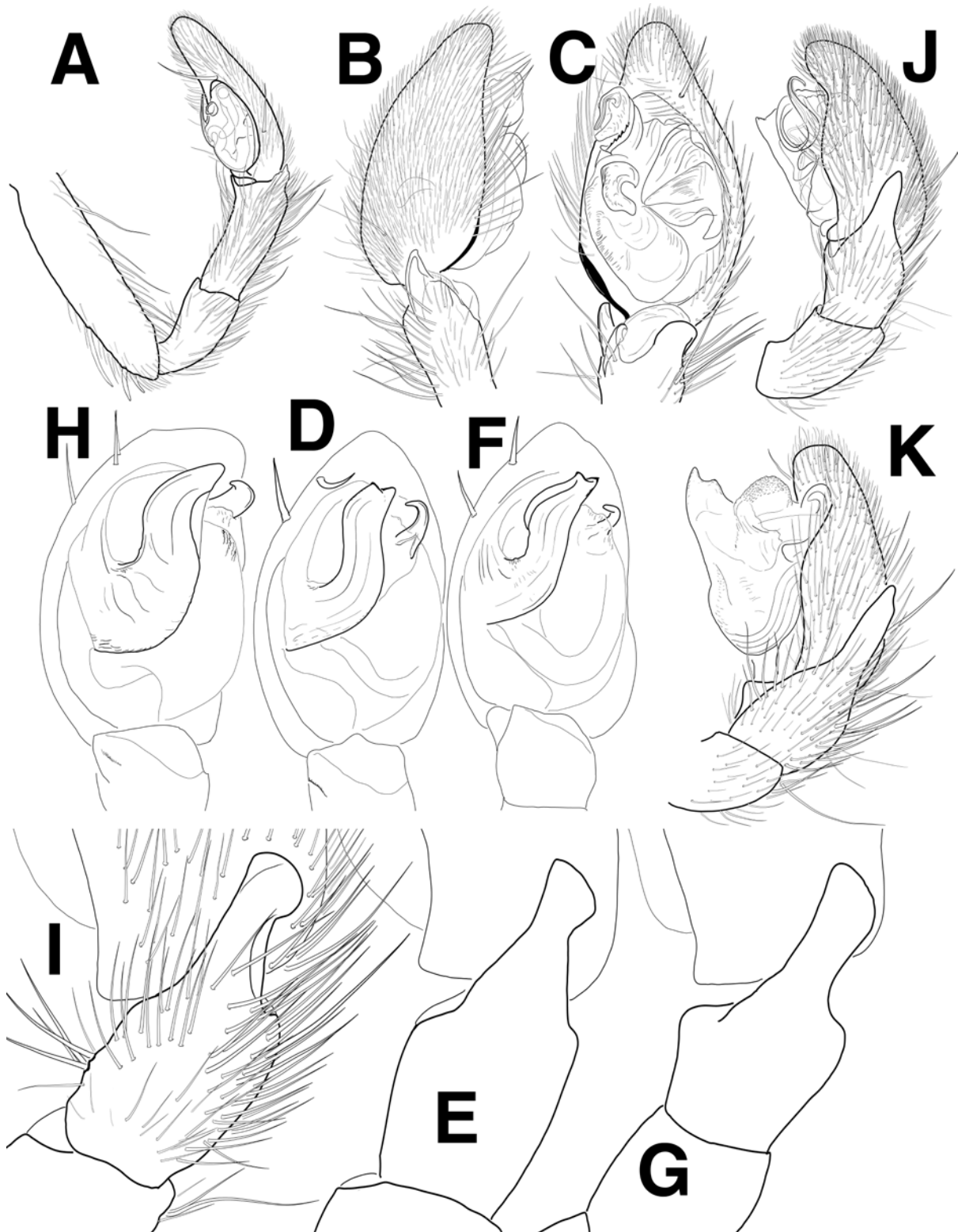


Figure 11. Gnaphosidae males. **A** *Drassodes lapidosus* pedipalp, retrolateral. **B, C** *Drassodex fritillifer* pedipalp retrolateral (**B**) and ventral (**C**). **D, E** *Haplodrassus lyndae* pedipalp ventral (**D**) and retrolateral tibial apophysis (RTA, **E**). **F, G** *Haplodrassus rufipes* pedipalp ventral (**F**) and RTA (**G**). **H, I** *Haplodrassus signifer* pedipalp ventral (**H**) and RTA (**I**). **J** *Trachyzelotes mutabilis* pedipalp, retrolateral. **K** *Zelotes manius* pedipalp, retrolateral.

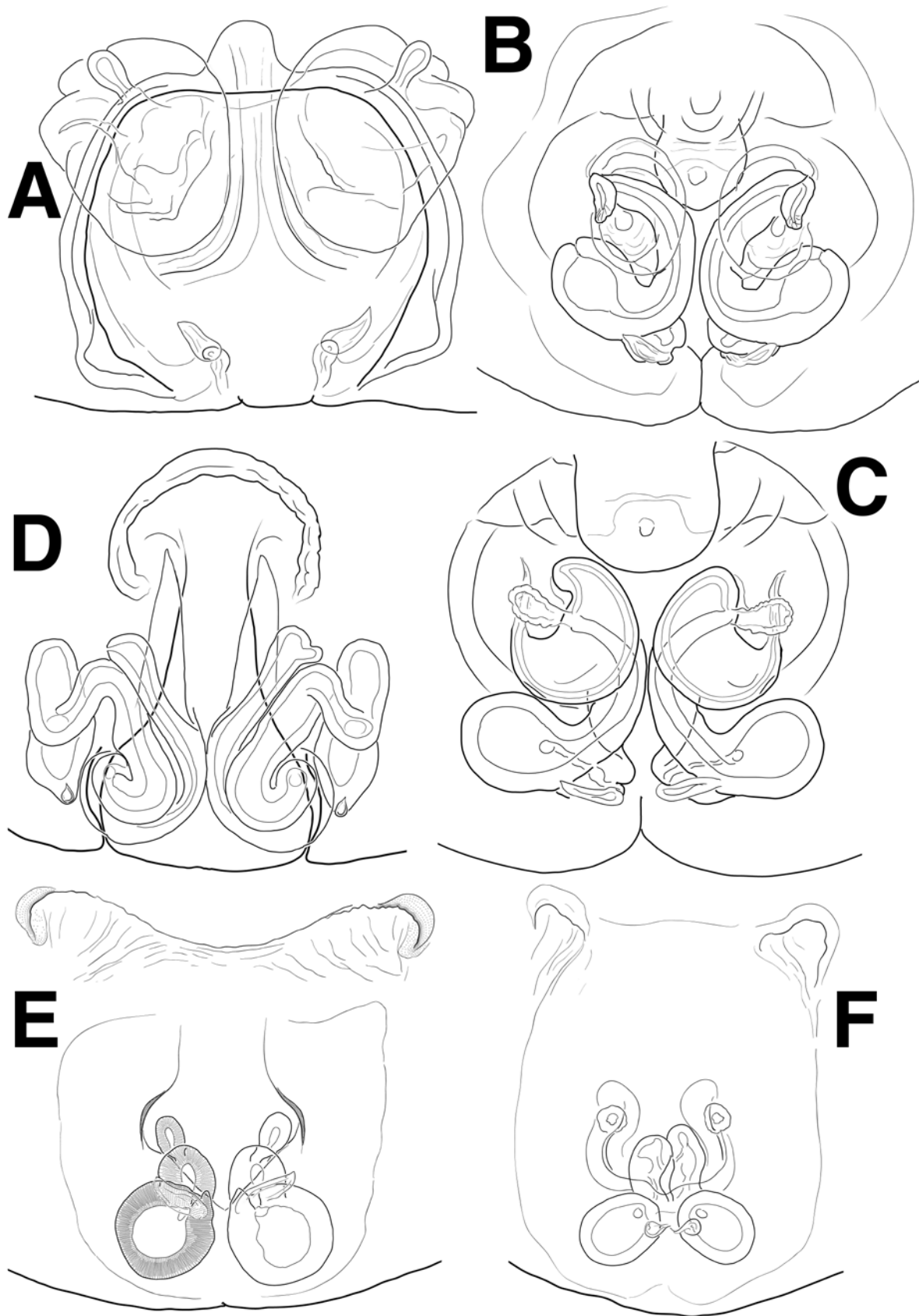


Figure 12. Gnaphosidae female vulvae **A** *Drassodex hispanus*. **B** *Gnaphosa occidentalis*. **C** *Gnaphosa tigrina*. **D** *Pterotricha simoni*. **E** *Zelotes latreillei*. **F** *Zelotes manius*.

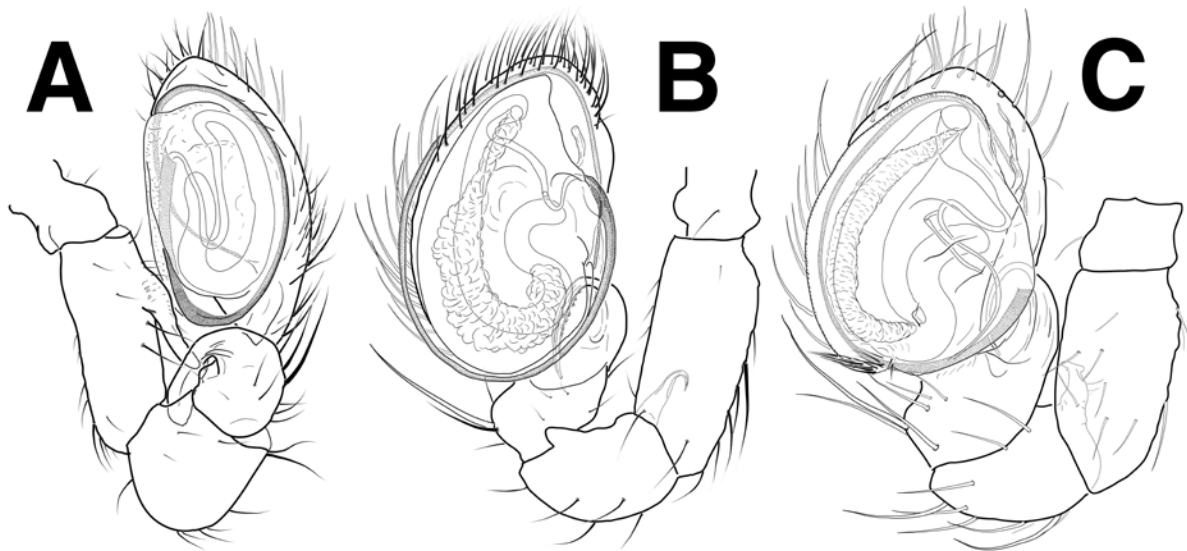


Figure 13. Hahniidae male pedipalps. **A** *Antistea elegans*. **B** *Hahnia nava*. **C** *Hahnia ononidum*.



Figure 14. Hersiliidae. *Hersiliola* cf. *simoni* epigynum.

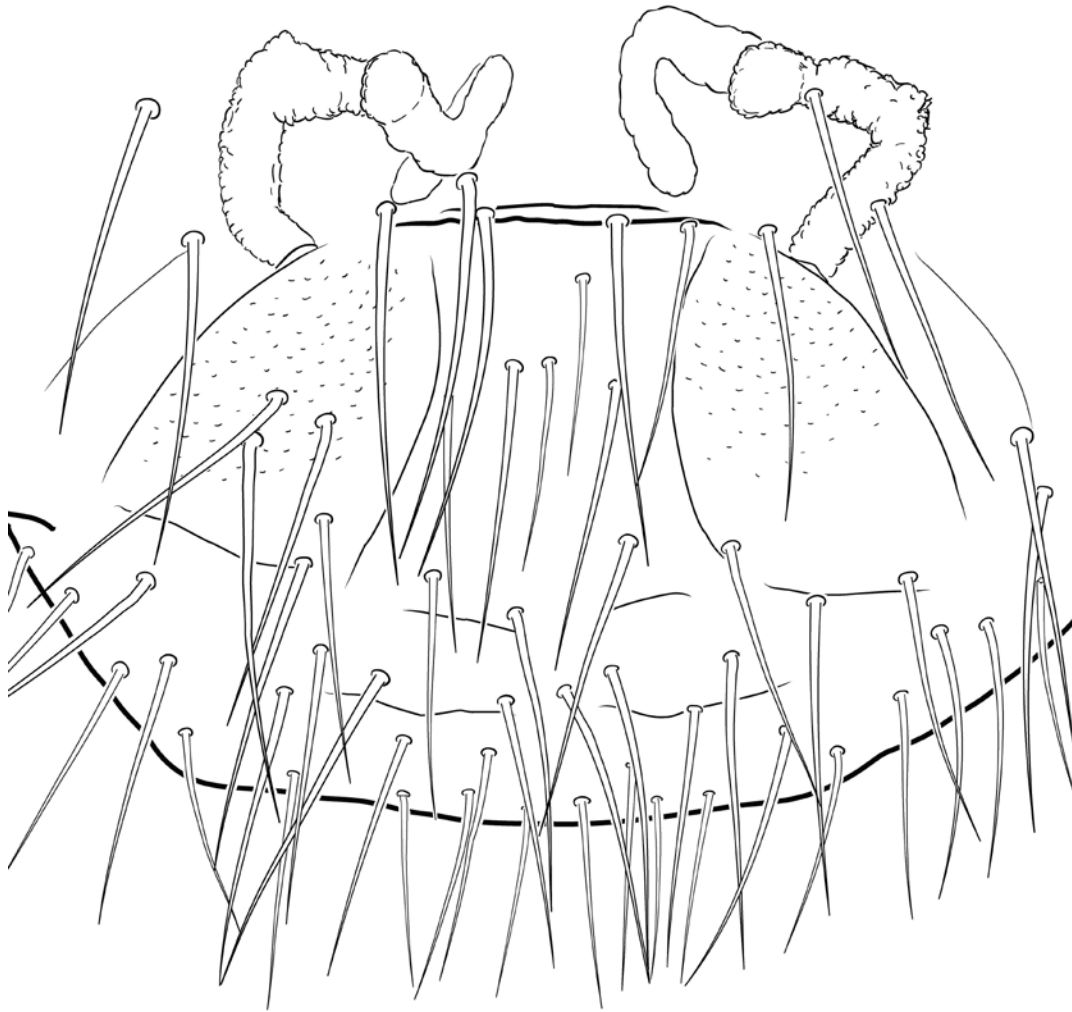


Figure 15. Leptonetidae. *Leptoneta paroculus* endogynum, ventral.

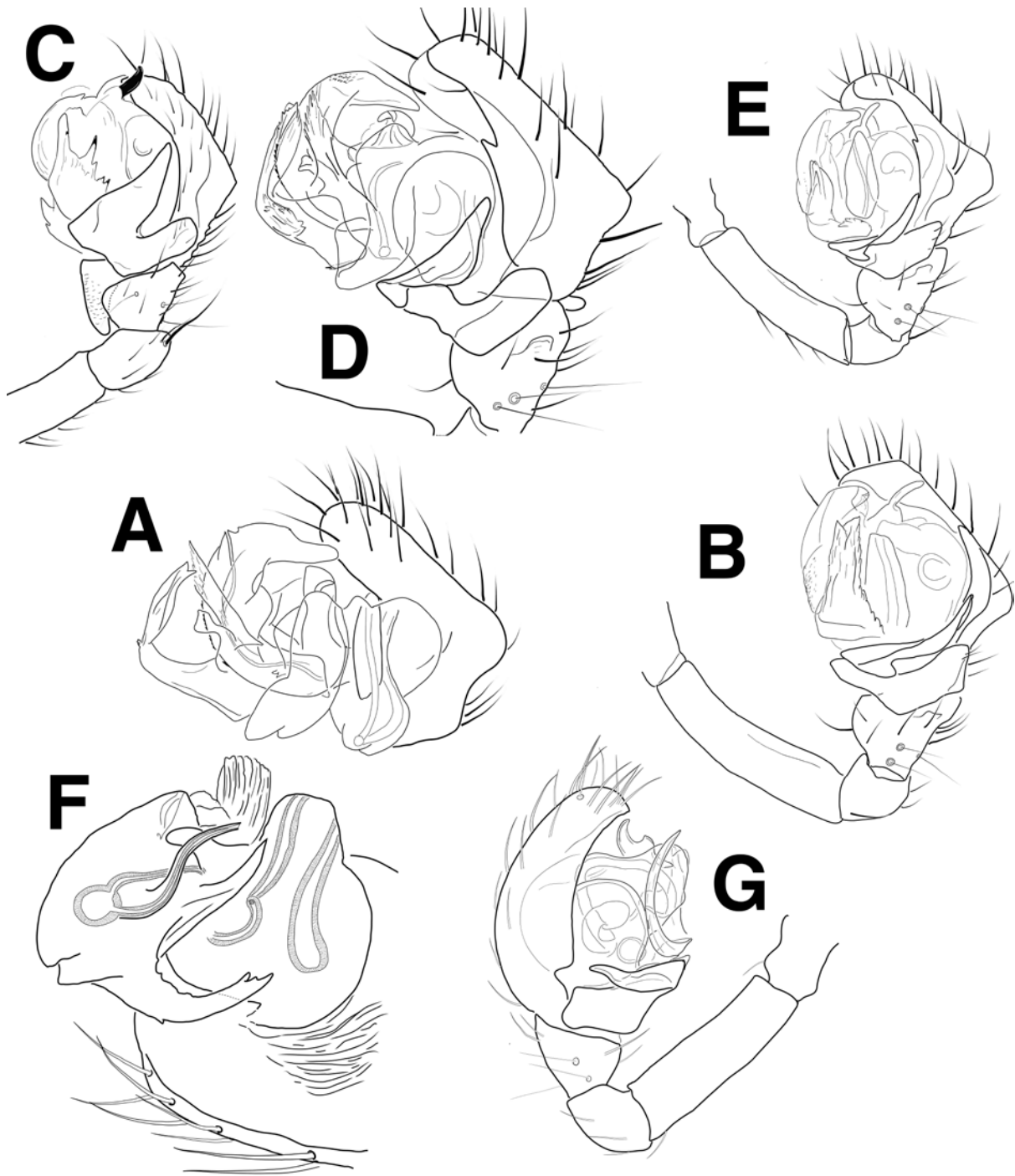


Figure 16. Linyphiidae males. **A+B** *Agyneta cf. alpica* expanded bulbus (A) and pedipalp retrolateral (B). **C** *Agyneta equestris* pedipalp retrolateral. **D+E** *Agyneta rurestris* expanded bulbus (D) and pedipalp retrolateral (E). **F** *Canariphantes tenerrimus* embolic division expanded. **G** *Canariphantes zonatus* pedipalp retrolateral.

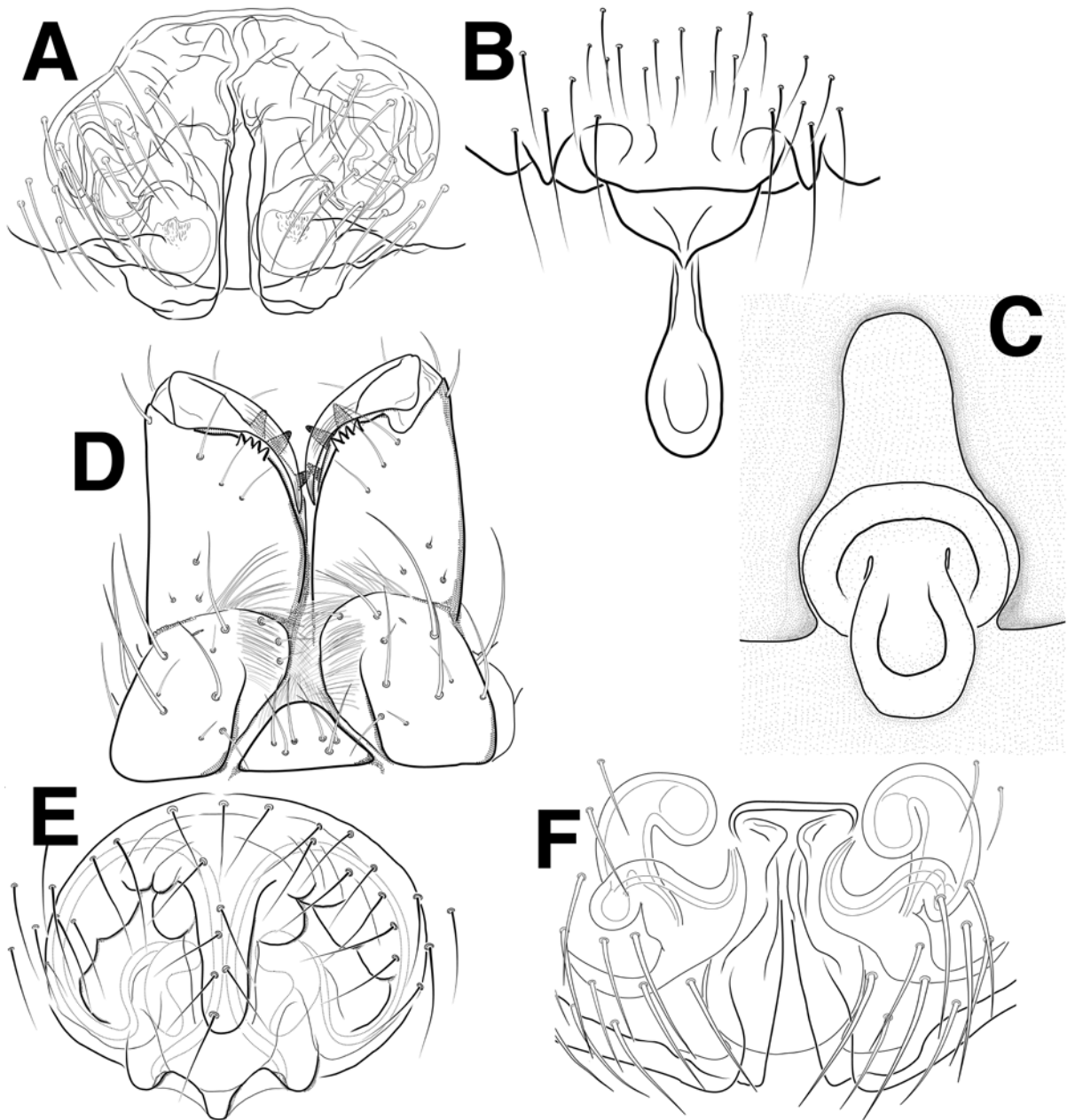


Figure 17. Linyphiidae females. **A** *Areoncus anguineus* epigynum. **B** *Canariphantes ritae* epigynum. **C** *Canariphantes tenerrimus* epigynum. **D+E** *Centromerus albidus* chelicerae (D) and epigynum (E). **F** *Diplocephalus protuberans* epigynum.

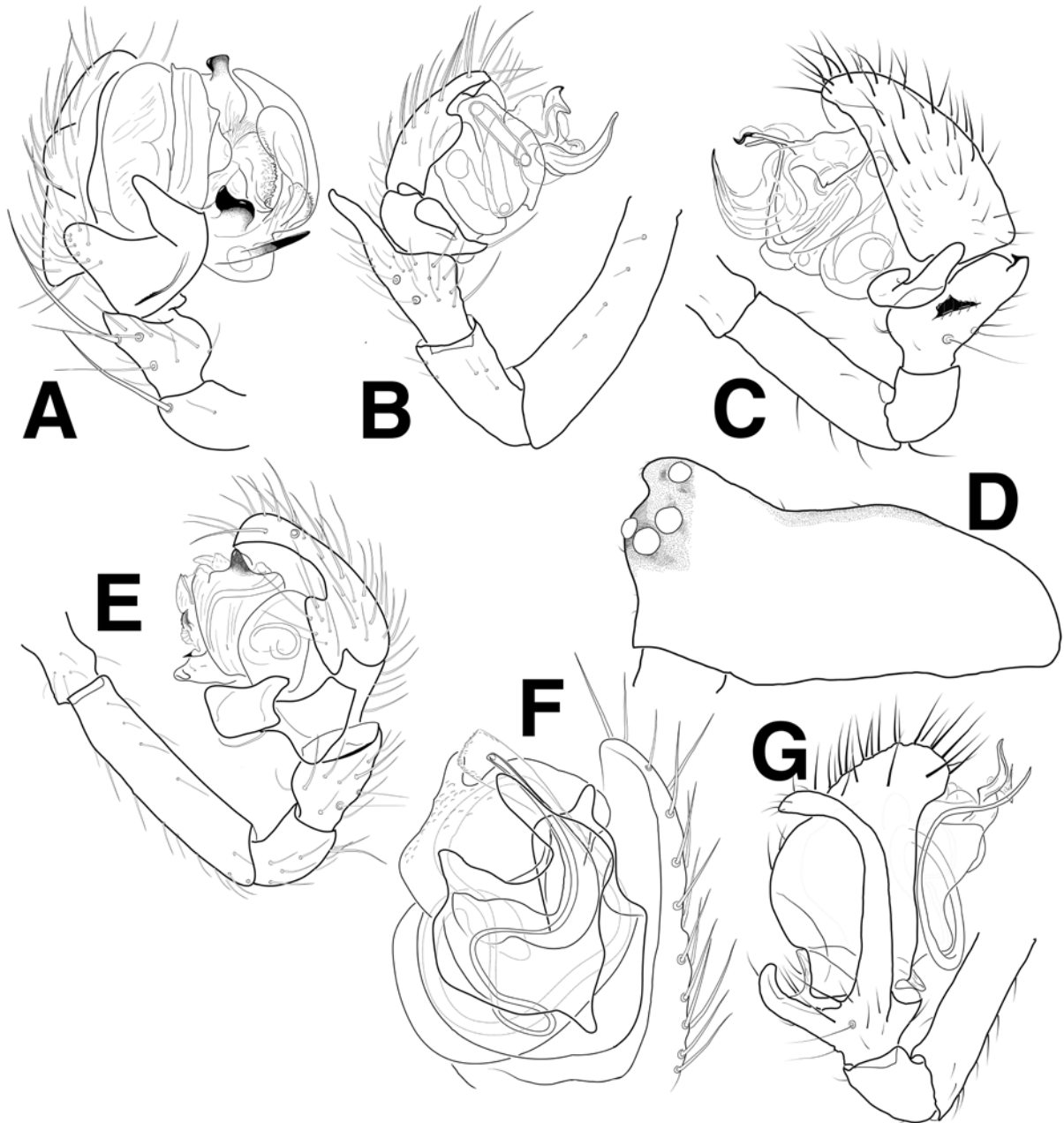


Figure 18. Linyphiidae males. **A** *Centromerus pabulator* pedipalp retrolateral, slightly expanded. **B** *Hilaira excisa* pedipalp retrolateral. **C+D** *Metopobactrus prominulus* f. *schenkeli* pedipalp (C) and prosoma (D). **E** *Oreonetides glacialis* pedipalp retrolateral. **F** *Porrhomma convexum* pedipalp expanded. **G** *Trichoncus saxicola* pedipalp dorsal.

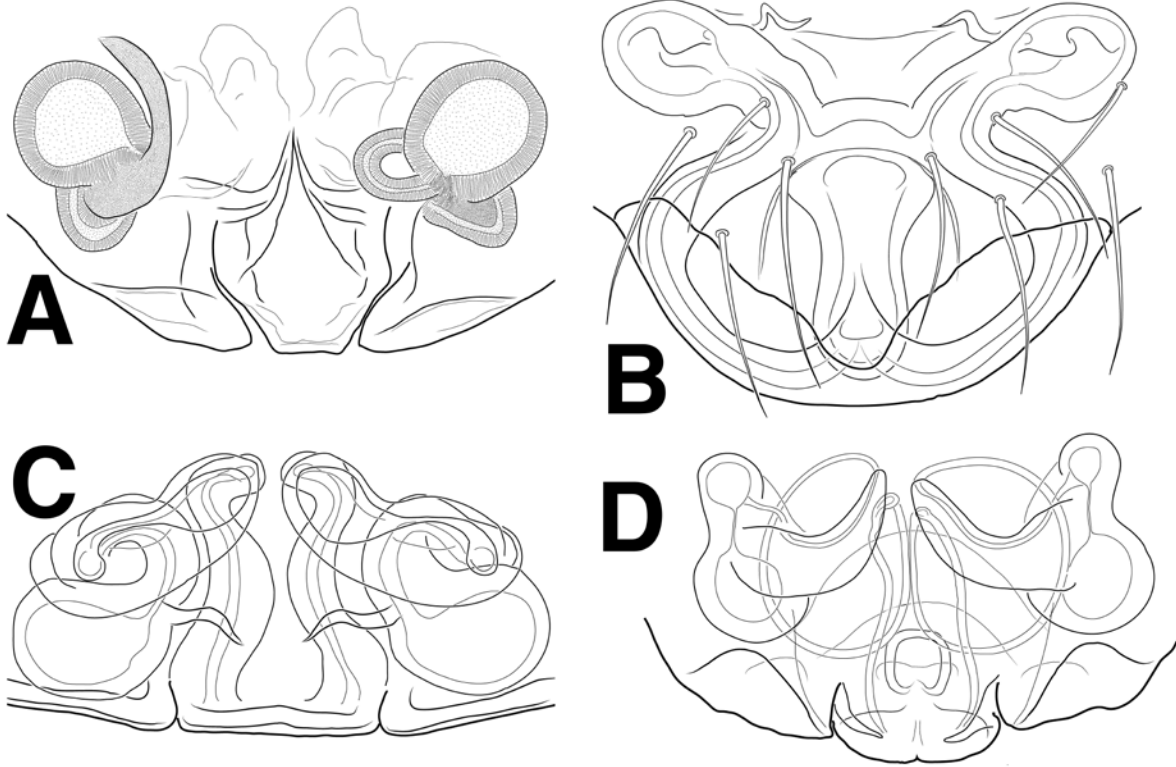


Figure 19. Linyphiidae females. **A** *Mecopisthes nicaeensis* vulva. **B** *Oreonetides glacialis* epigynum. **C** *Pelecopsis bucephala* vulva. **D** *Trichoncus cf. auritus* vulva.

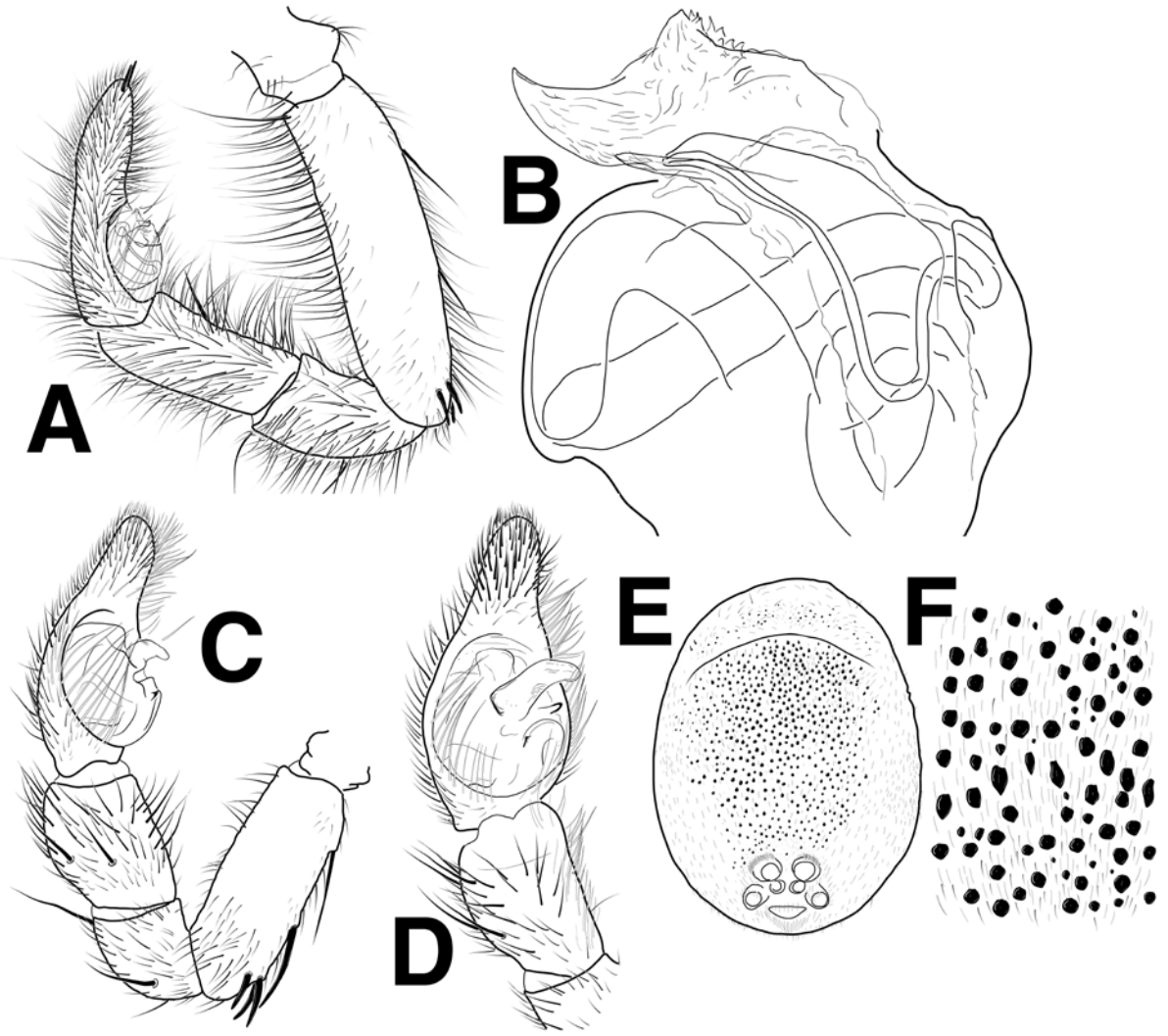


Figure 20. Lycosidae males. **A+B** *Arctosa leopardus* pedipalp prolateral (A) and expanded bulb (B). **C–F** *Hygrolycosa rubrofasciata* pedipalp lateral (C) and ventral (D), opisthosoma ventral (E) and detail (F).

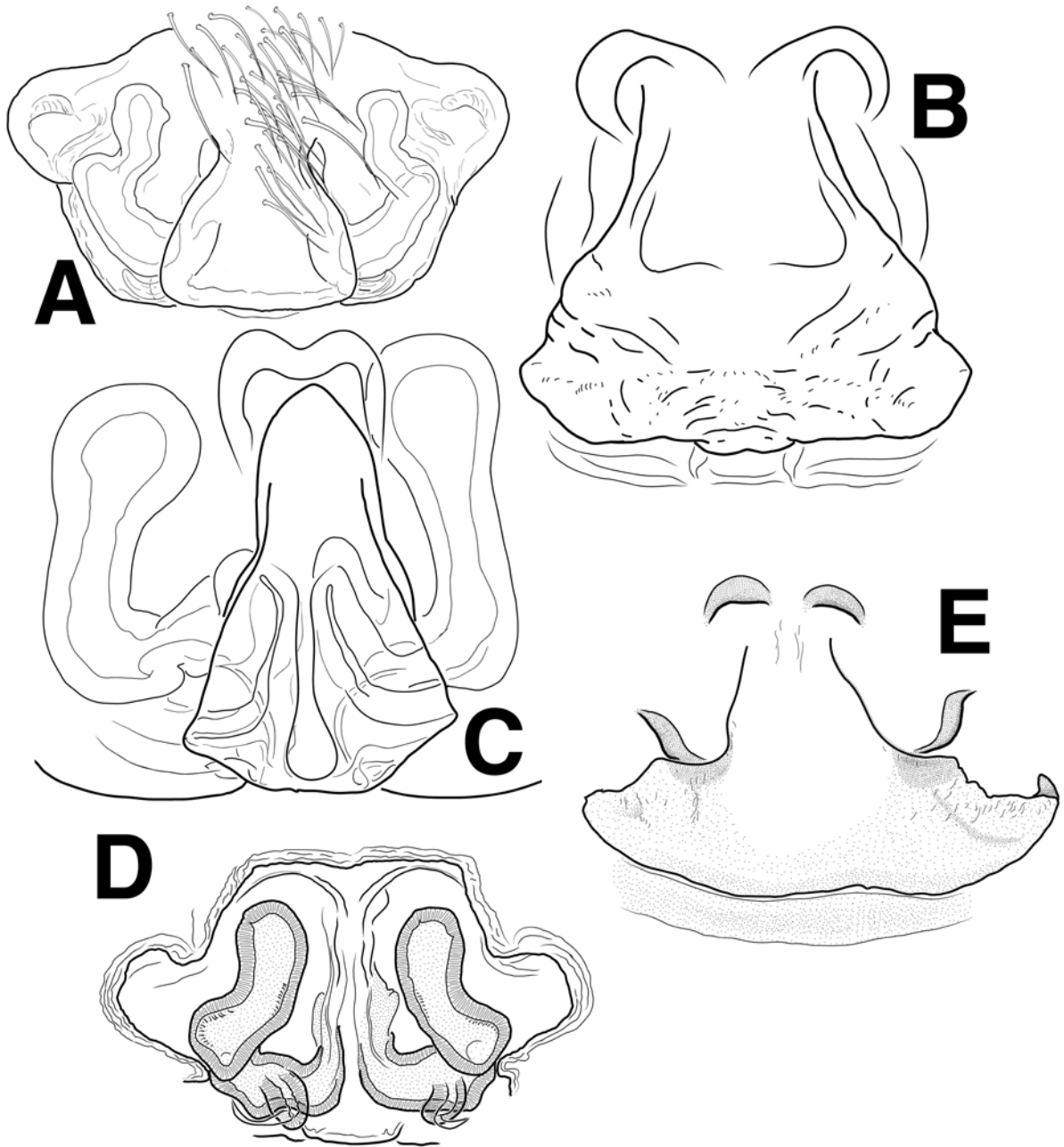


Figure 21. Lycosidae females. **A** *Pardosa femoralis* epigynum. **B** *Pardosa mixta* epigynum. **C** *Pardosa morosa* epigynum. **D** *Pardosa pullata* vulva. **E** *Pardosa* sp. epigynum.

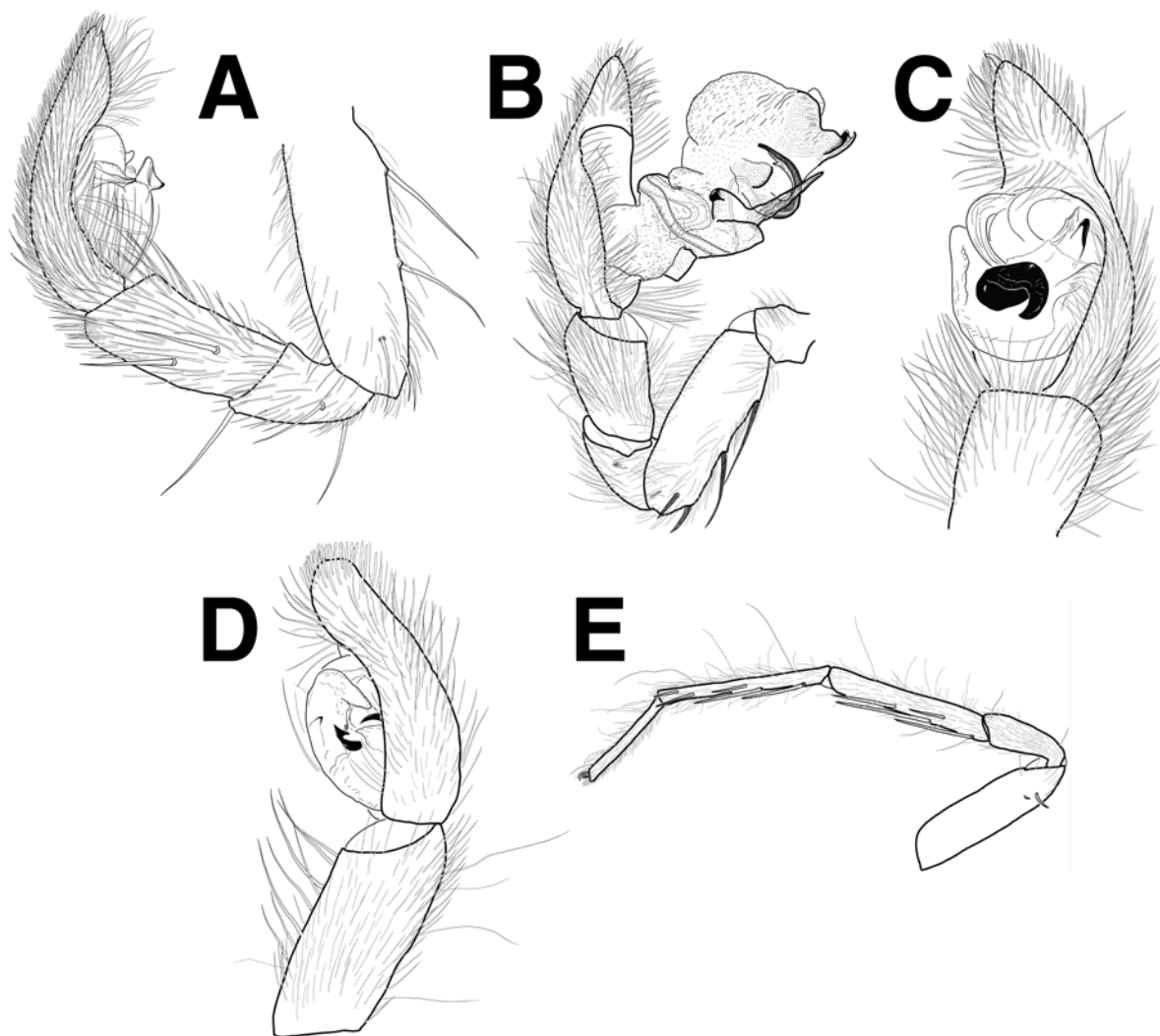


Figure 22. Lycosidae males. **A** *Pardosa morosa* pedipalp prolateral. **B** *Pardosa pullata* pedipalp expanded. **C** *Pyrenecosa rupicola* pedipalp ventral. **D+E** *Trabea cazorla* pedipalp retrolateral (D) and leg I prolateral (E).

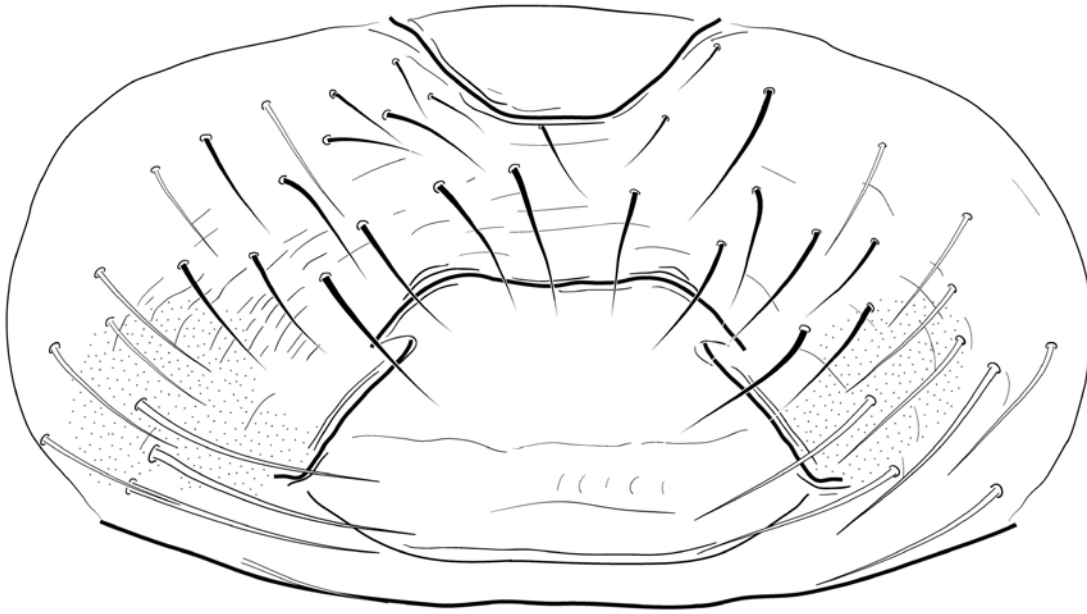


Figure 23. Mimetidae. *Mimetus laevigatus* epigynum.

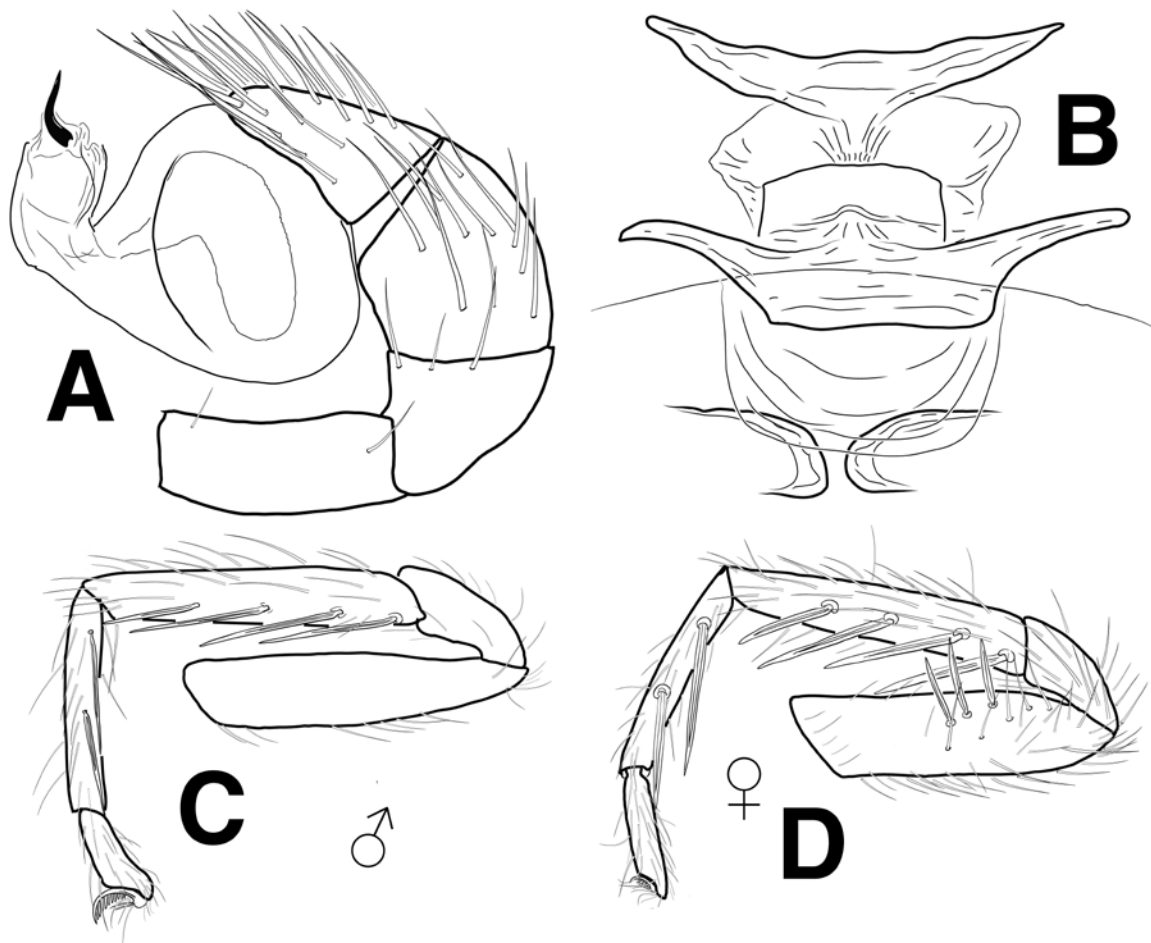


Figure 24. Oonopidae. **A–D** *Oonops procerus* pedipalp (A), endogynum dorsal (B), leg I, prolatral, male (C) and female (D).

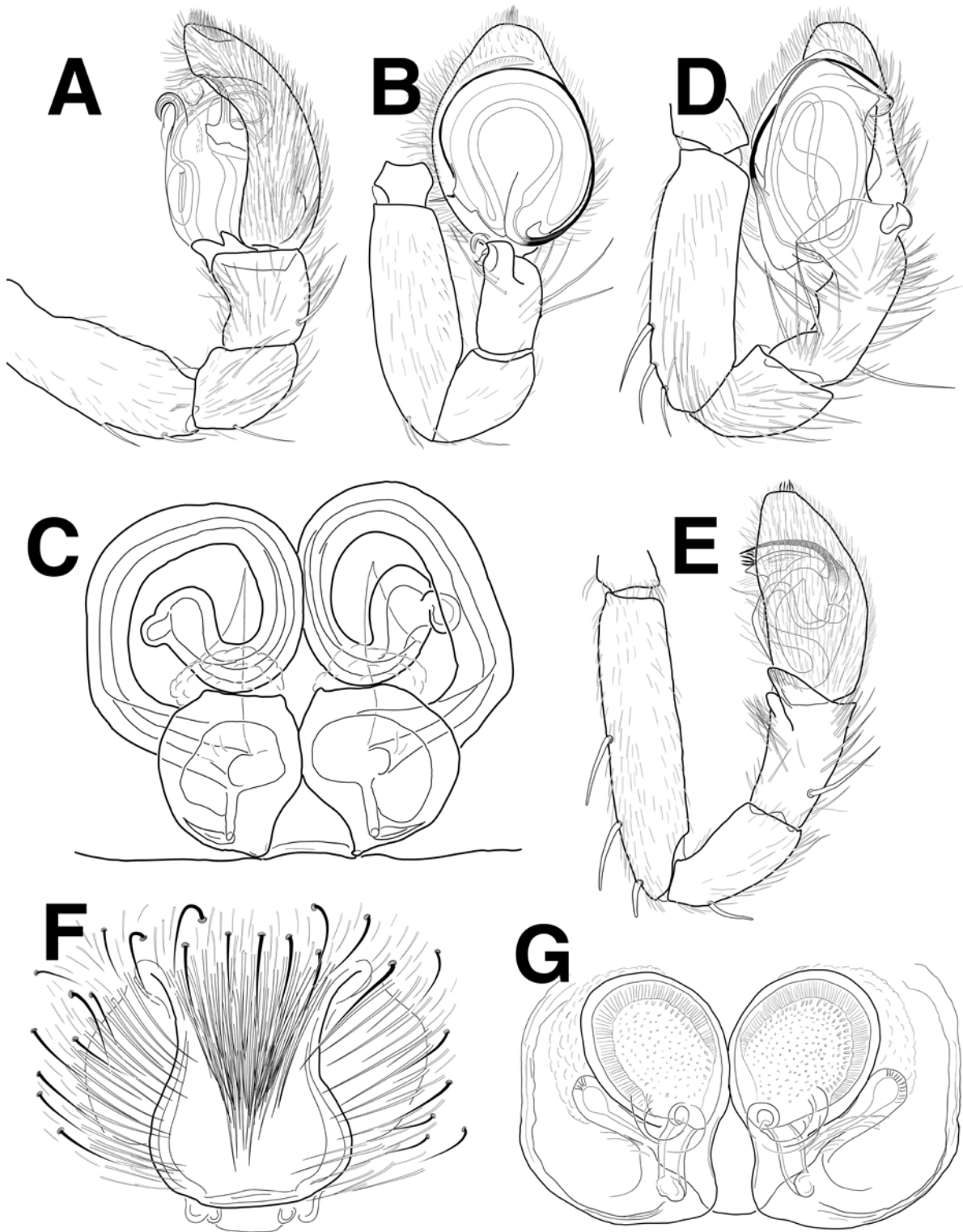


Figure 25. Philodromidae. **A** *Celerrimus duffeyi* pedipalp retrolateral. **B+C** *Philodromus dispar* pedipalp ventral (B) and vulva (C). **D** *Philodromus emarginatus* pedipalp ventral. **E** *Philodromus fuscolimbatus* pedipalp dorso-retrolateral. **F** *Thanatus* cf. *lineatipes* epigynum. **G** *Tibellus oblongus* vulva.

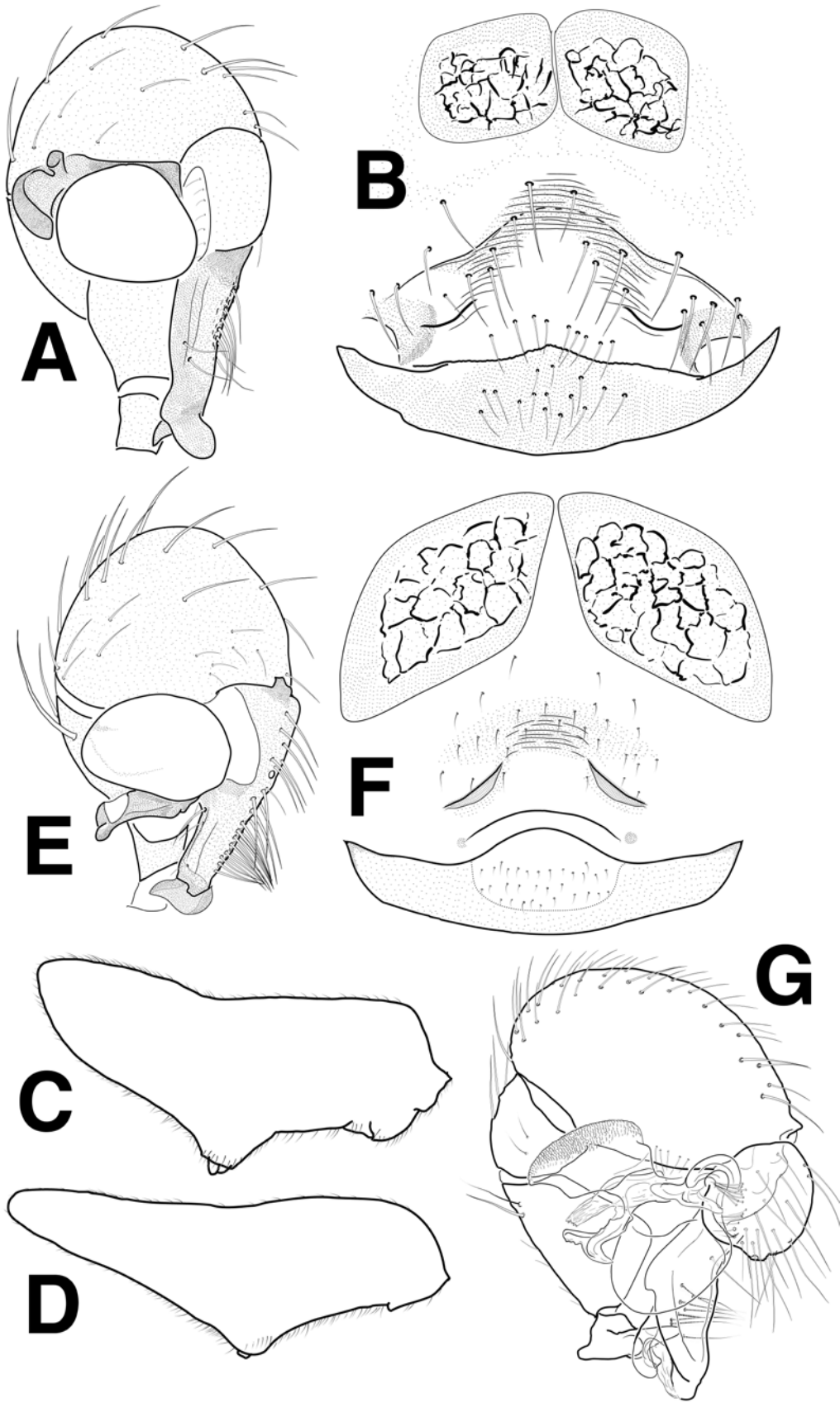


Figure 26. Pholcidae. **A–D** *Holocnemus caudatus* pedipalp (A), epigynum (B), and female (C) and male (D) opisthosoma. **E, F** *Holocnemus hispanicus* pedipalp (E) and epigynum (F). **G** *Pholcus opilionoides* pedipalp.

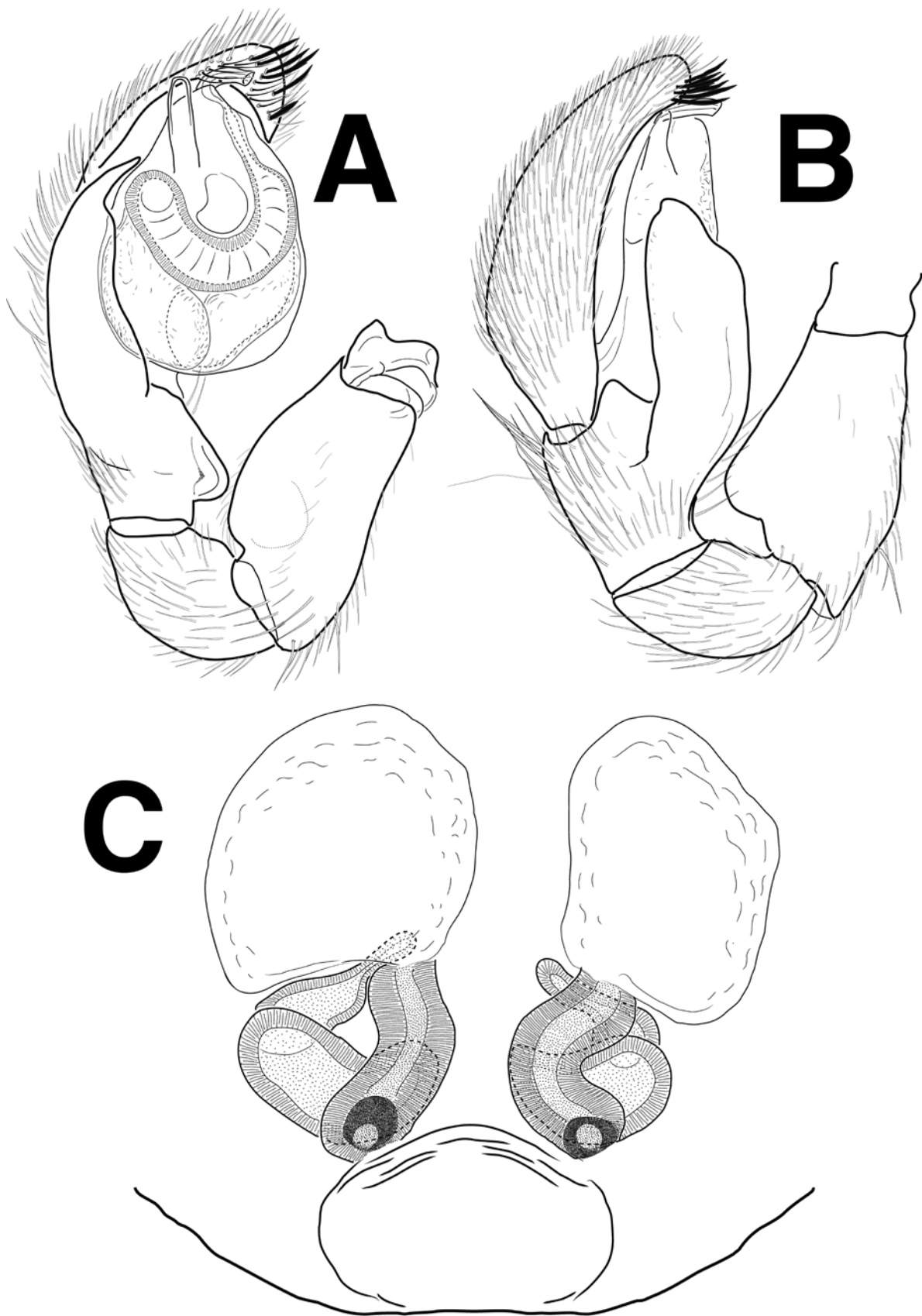


Figure 27. Phrurolithidae. **A, B** *Phrurolithus festivus* pedipalp, retrolateral–ventral (A) and retrolateral (B). *Phrurolithus* cf. *szilyi* vulva.

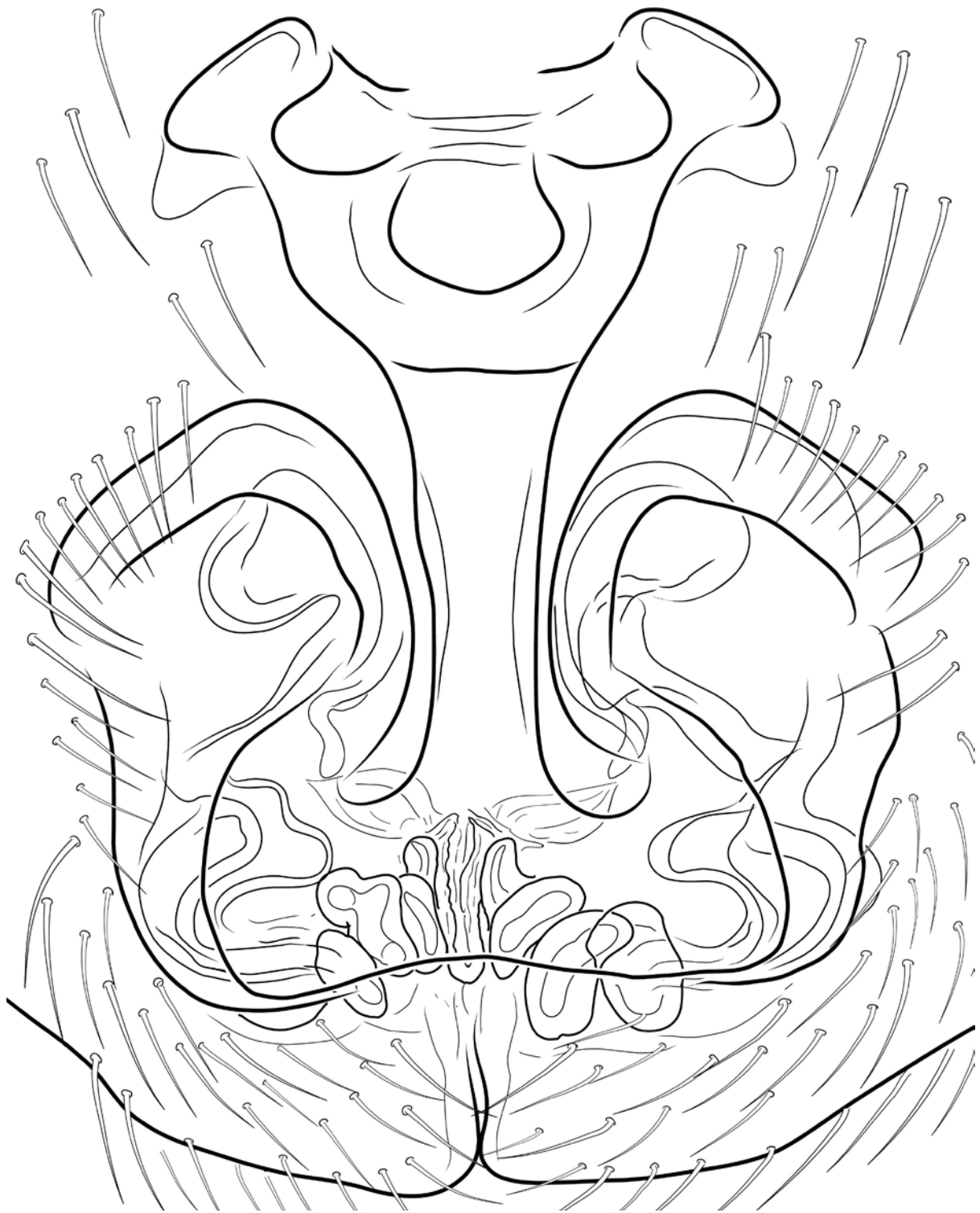


Figure 28. Pisauridae. *Pisaura mirabilis* epigynum.

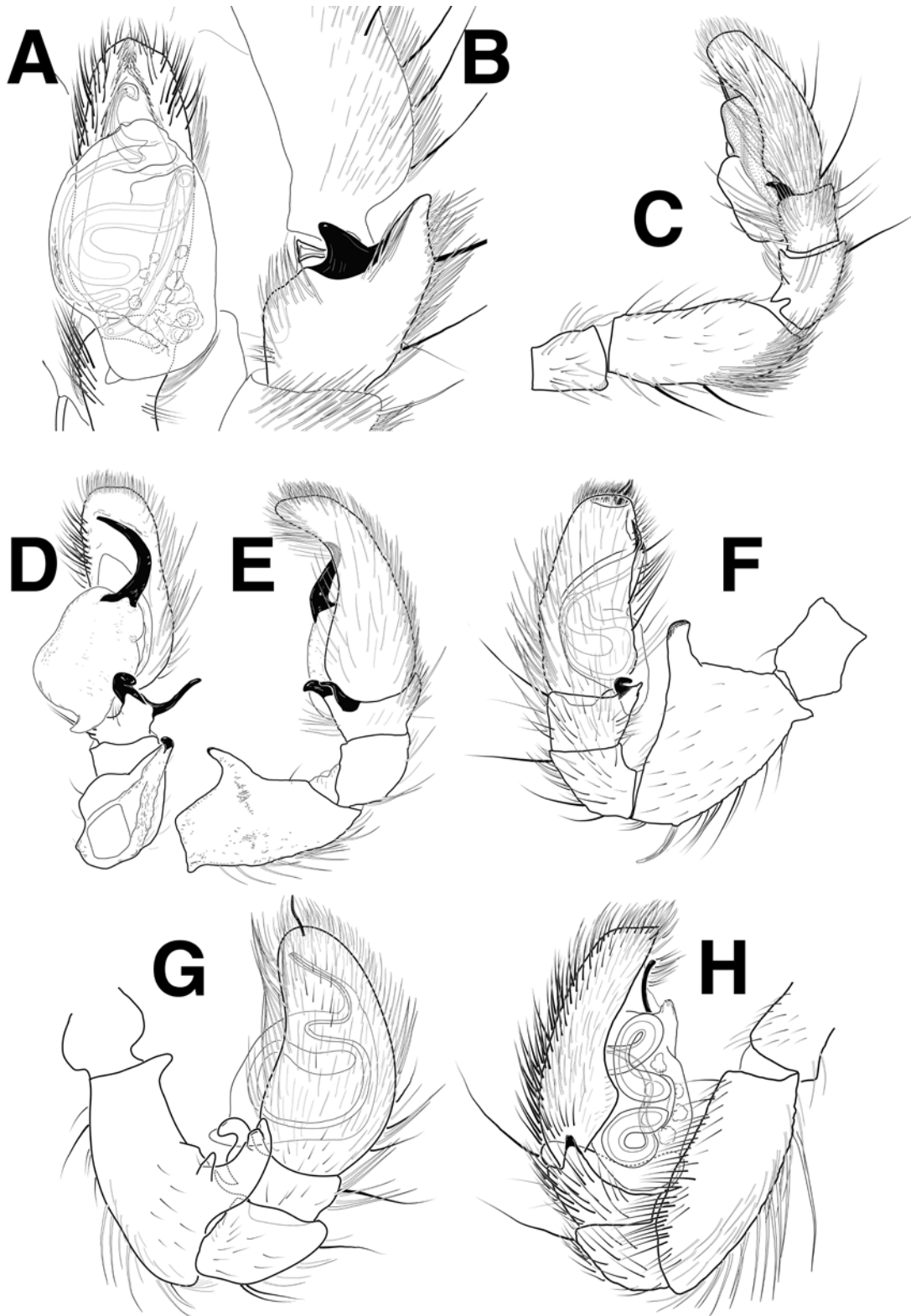


Figure 29. Salticidae males. **A, B** *Aelurillus v-insignitus* ventral (A) and retrolateral (B). **C** *Habrocestum* cf. *ibericum* retrolateral. **D, E** *Heliophanus cupreus* ventral (D) and retrolateral (E). **F** *Heliophanus patagiatus* dorsolateral. **G** *Heliophanus tribulosus* dorsolateral. **H** *Iberattus semiglabratus* retrolateral.

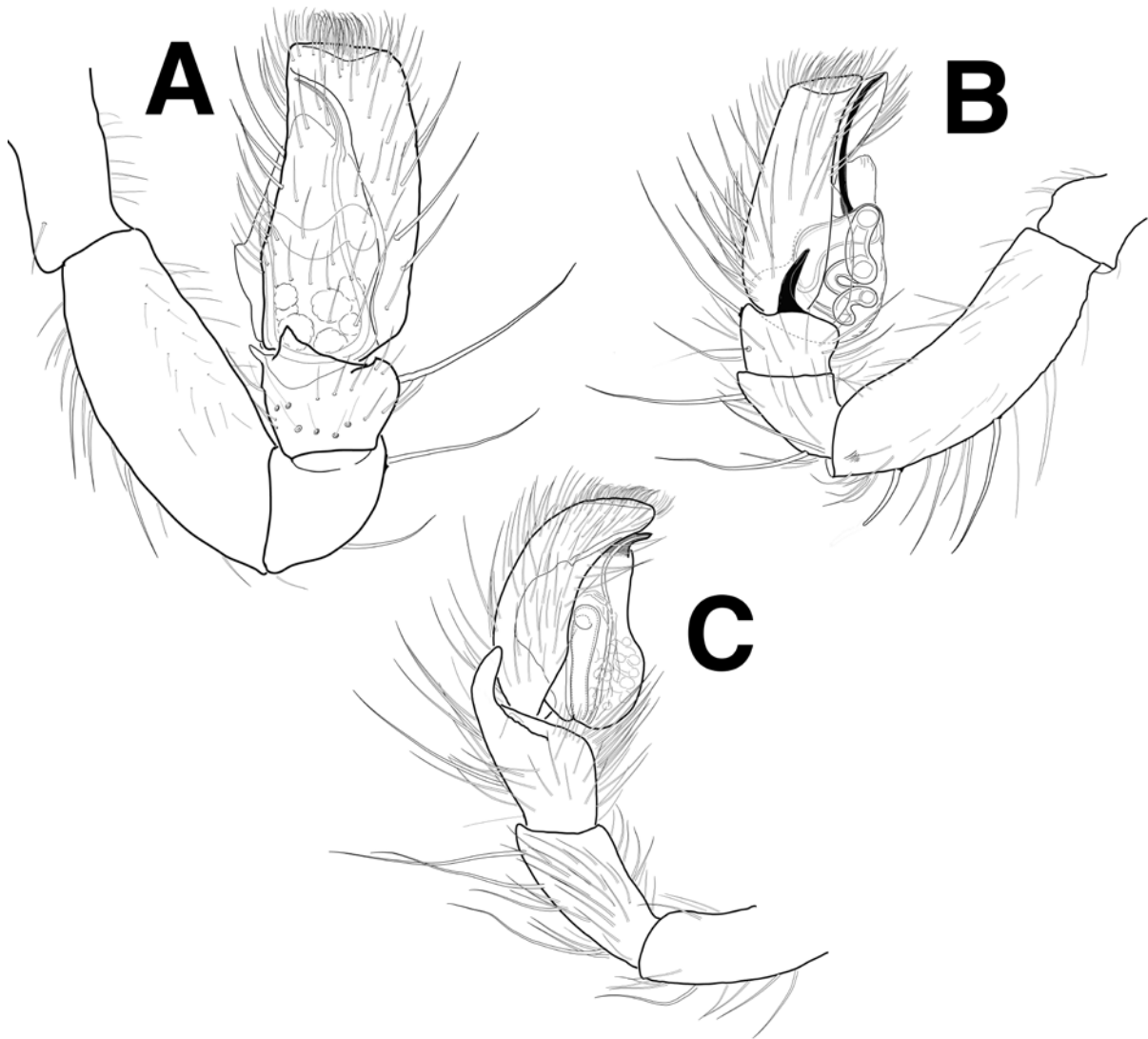


Figure 30. Salticidae males. **A** *Icius hamatus* dorsolateral. **B** *Macarokeris nidicolens* retrolateral. **C** *Salticus confusus* retrolateral.

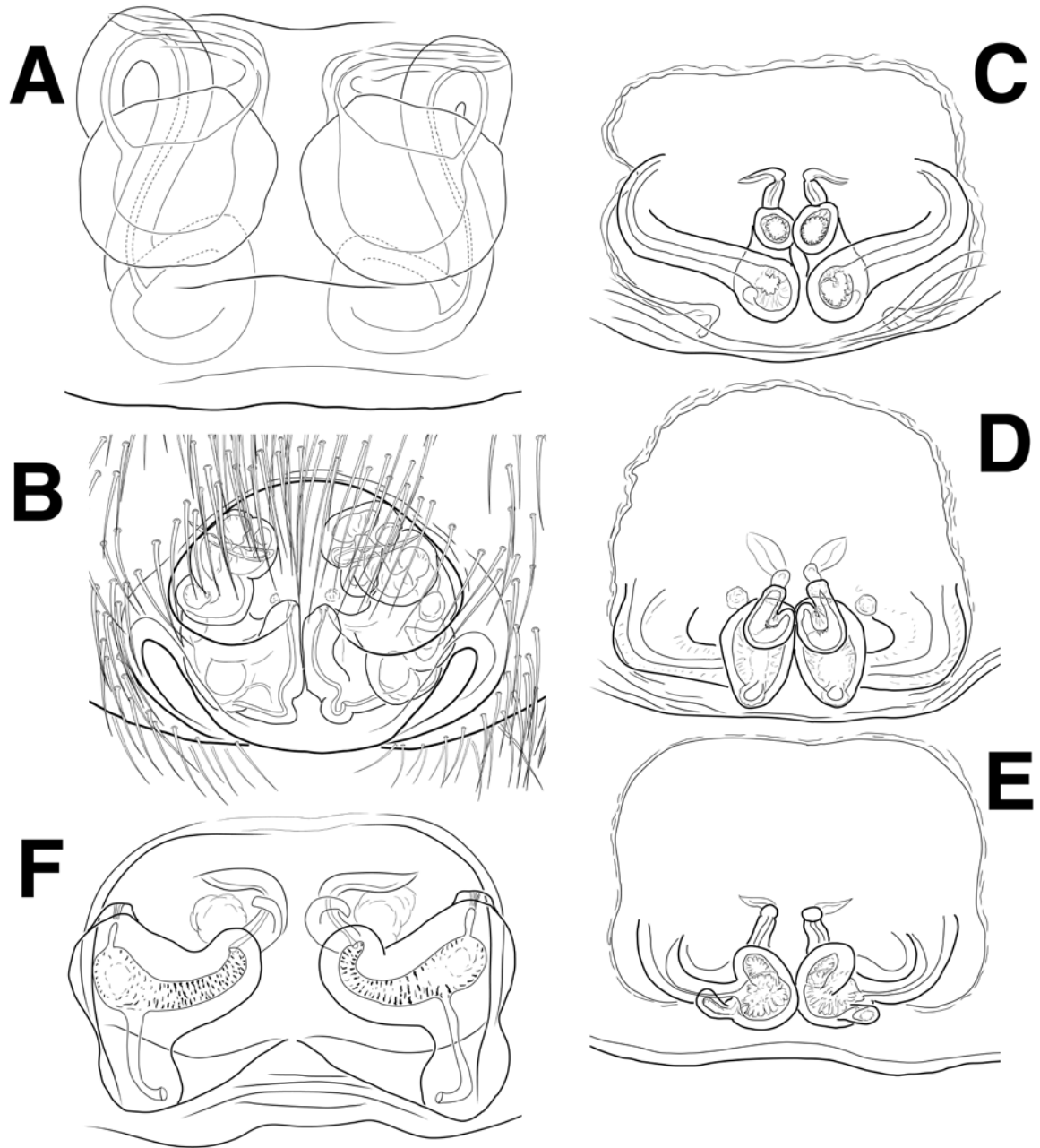


Figure 31. Salticidae females. **A** *Carrhotus xanthogramma* vulva. **B** *Evarcha falcata* epigynum. **C–D** *Heliophanus cupreus* vulva variations. **F** *Heliophanus tribulosus* vulva.

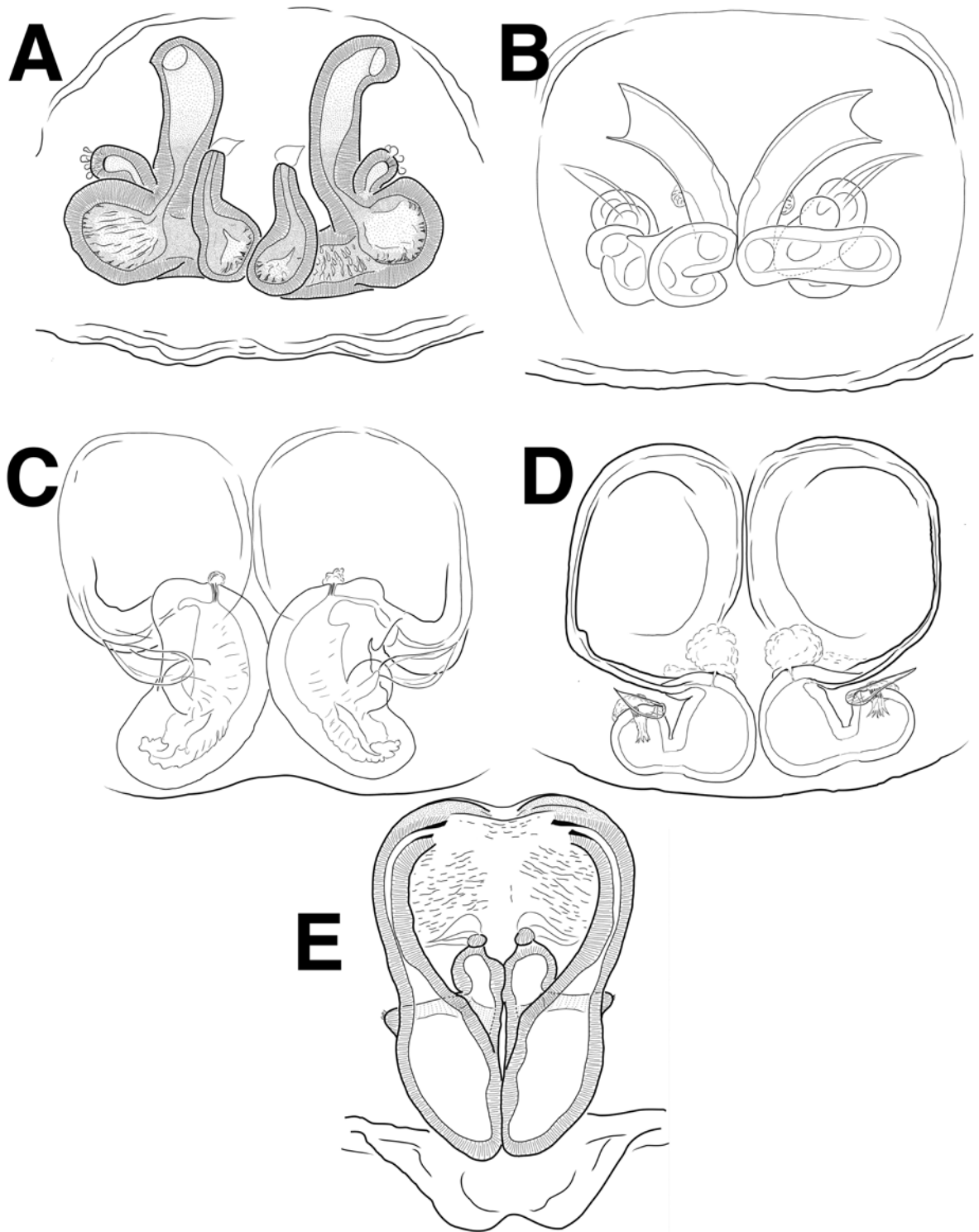


Figure 32. Salticidae female vulvae. **A** *Icius hamatus*. **B** *Macaroeris nidicolens*. **C** *Pseudeuophrys erratica*. **D** *Pseudeuophrys lanigera*. **E** *Salticus confusus*.

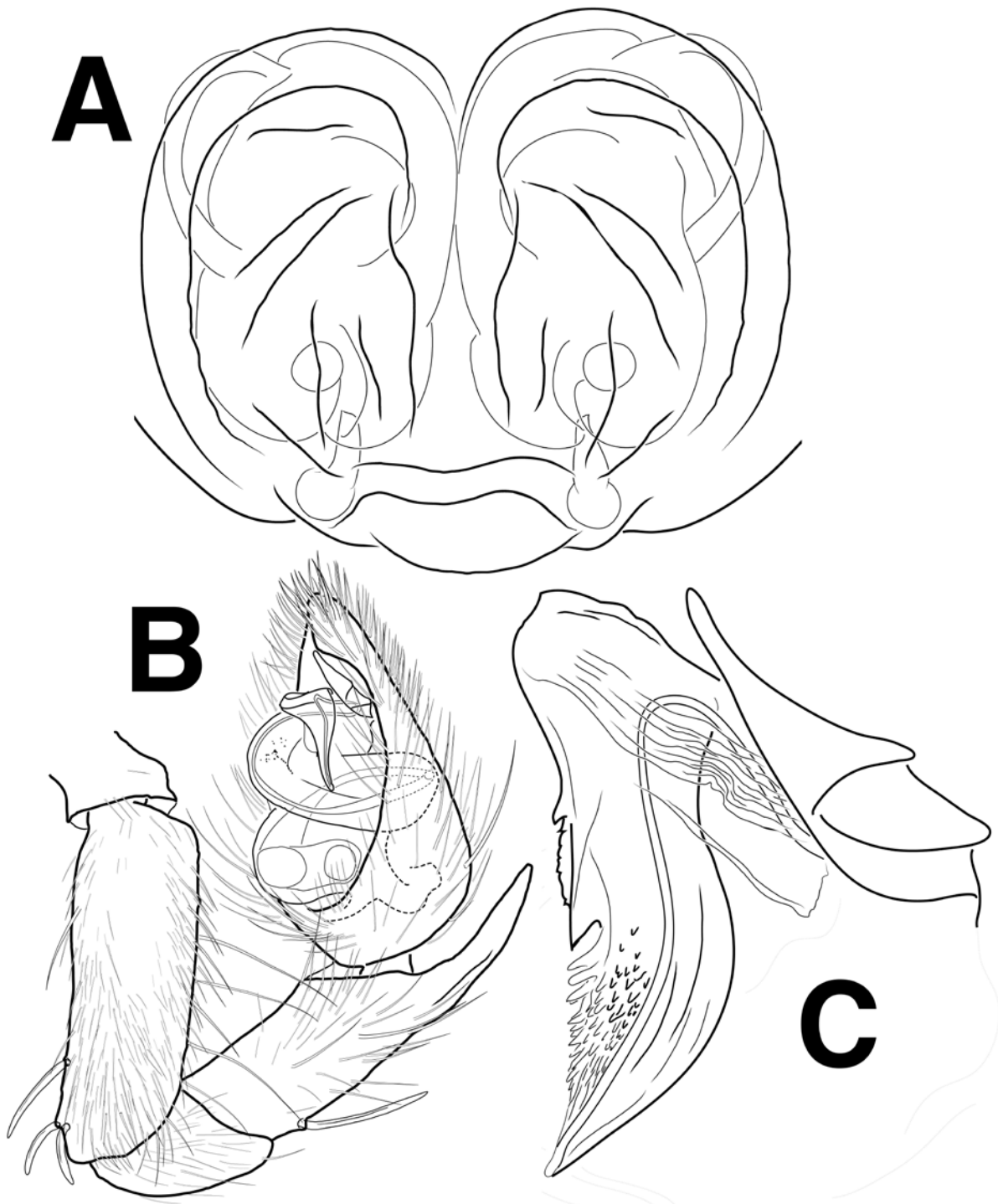


Figure 33. Sparassidae. **A** *Micrommata formosa* epigynum. **B, C** *Micrommata virescens* pedipalp (**B**) and embolus (**C**).

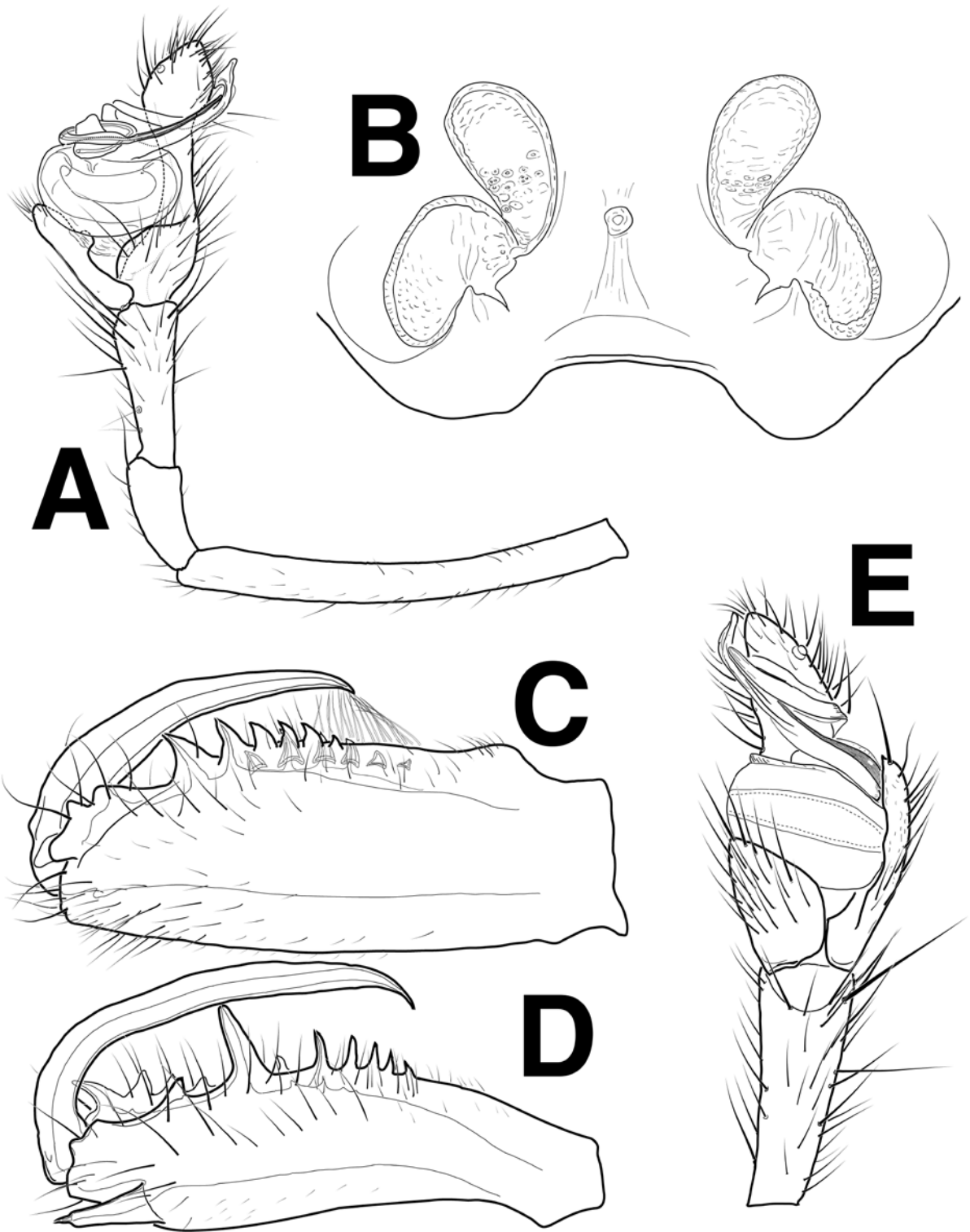


Figure 34. Tetragnathidae. **A–D** *Tetragnatha extensa* pedipalp (A), vulva (B), and female (C) and male (D) chelicerae. **E** *Tetragnatha intermedia* pedipalp.

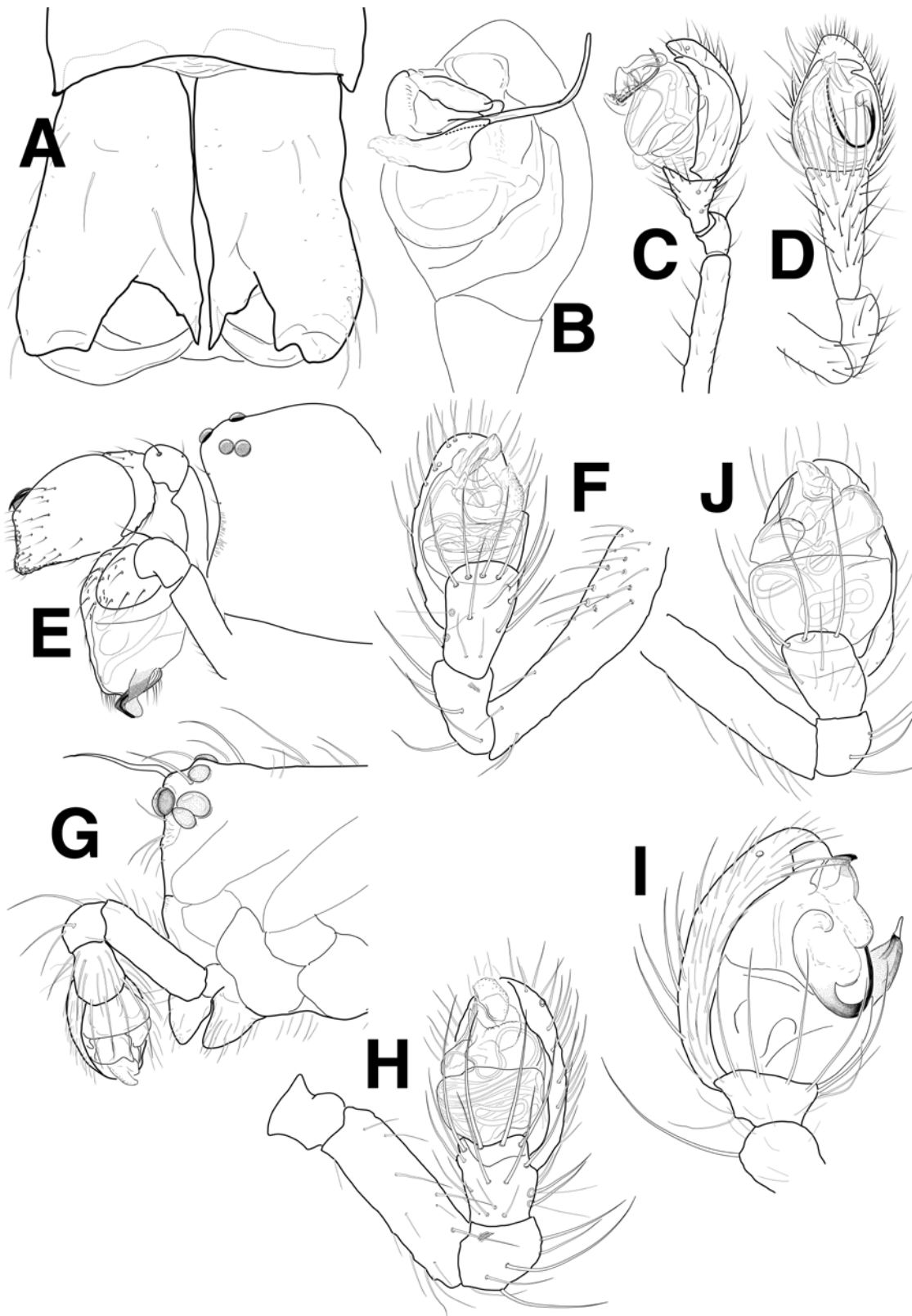


Figure 35. Theridiidae males. **A–C** *Enoplognatha afroditae* chelicerae (A), pedipalp ventral (B) and lateral (C), slightly expanded. **D** *Enoplognatha franzi* pedipalp ventral. **E** *Euryopsis margaritatus* pedipalps and prosoma, lateral. **F** *Phylloneta sisypchia* pedipalp ventral. **G+H** *Theridion betteni* prosoma (G) and pedipalp, ventral (H). **I** *Theridion hannoniae* pedipalp prolateral. **J** *Theridion mystaceum* pedipalp ventral.

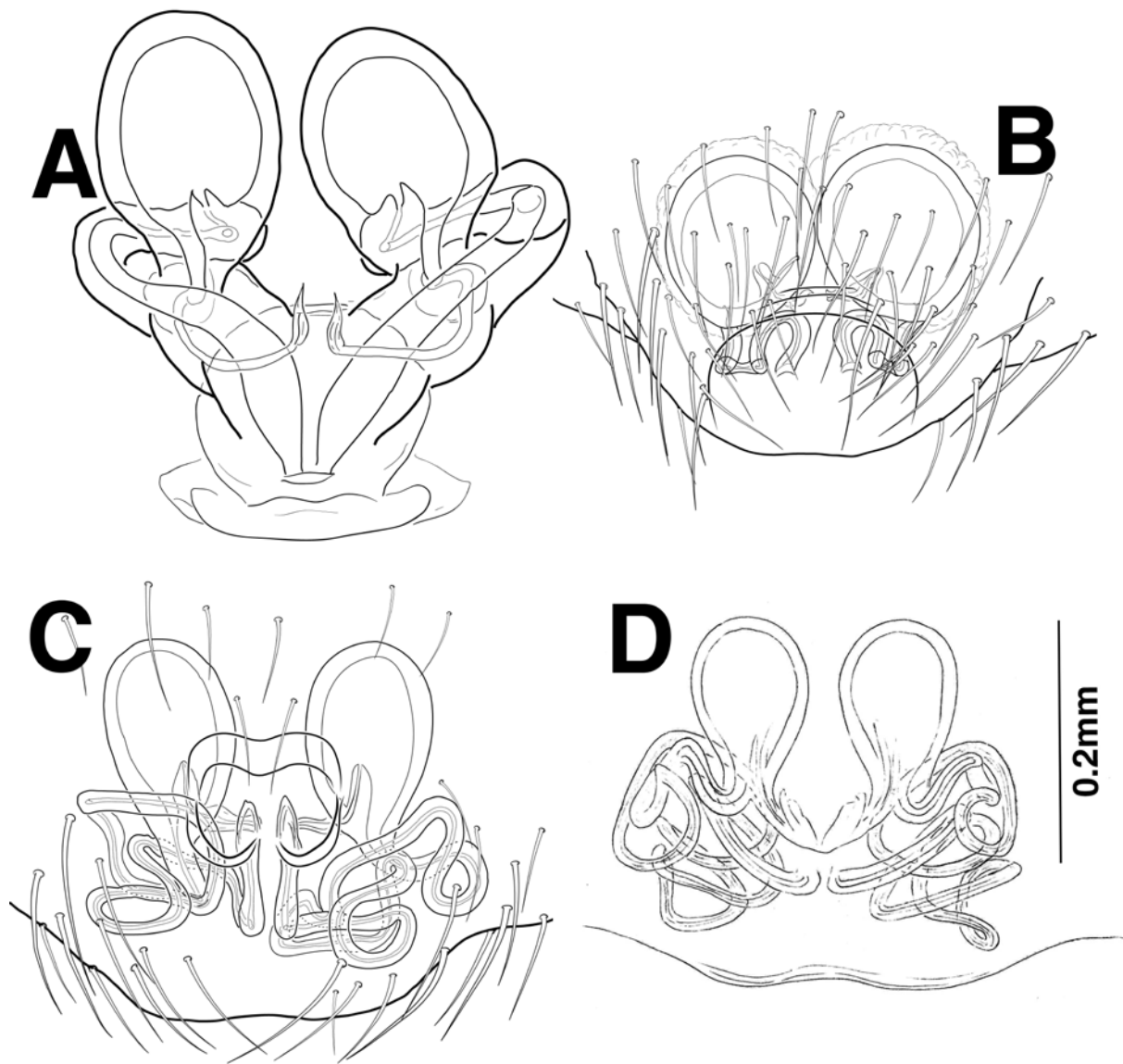


Figure 36. Theridiidae females. **A** *Robertus mediterraneus* vulva. **B** *Theridion betteni* epigyne. **C+D** *Theridion wiehlei* epigyne (C) and vulva of a specimen from Algeria in Simon's collection in the Muséum national d'Histoire naturelle, Paris (D, courtesy of Barbara Knoflach-Thaler).

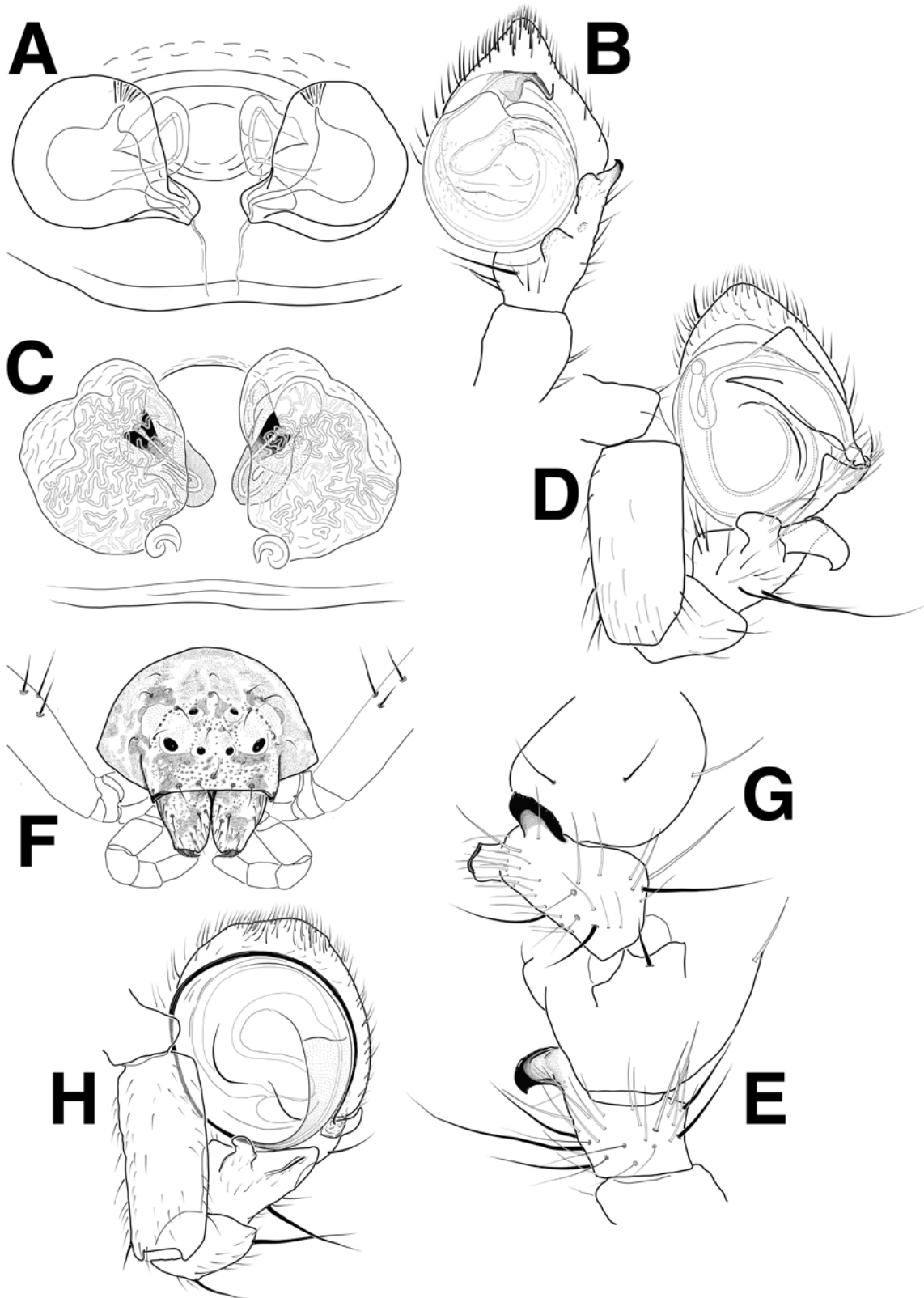


Figure 37. Thomisidae. **A+B** *Misumena vatia* vulva (A) and pedipalp ventral (B). **C** *Thomisus onustus* vulva. **D+E** *Tmarus punctatissimus* pedipalp ventral (D) and tibial apophysis dorsal (E). **F+G** *Tmarus stellio* female face (F) and male tibial apophysis dorsal (G). **H** *Xysticus kempeleni* pedipalp ventral.



Figure 38. Titanoecidae. *Titanoeca monticola* pedipalp, retrolateral.



Figure 39. Uloboridae. *Hyptiotes flavidus* pedipalp, prolateral (A) and epigynum (B).

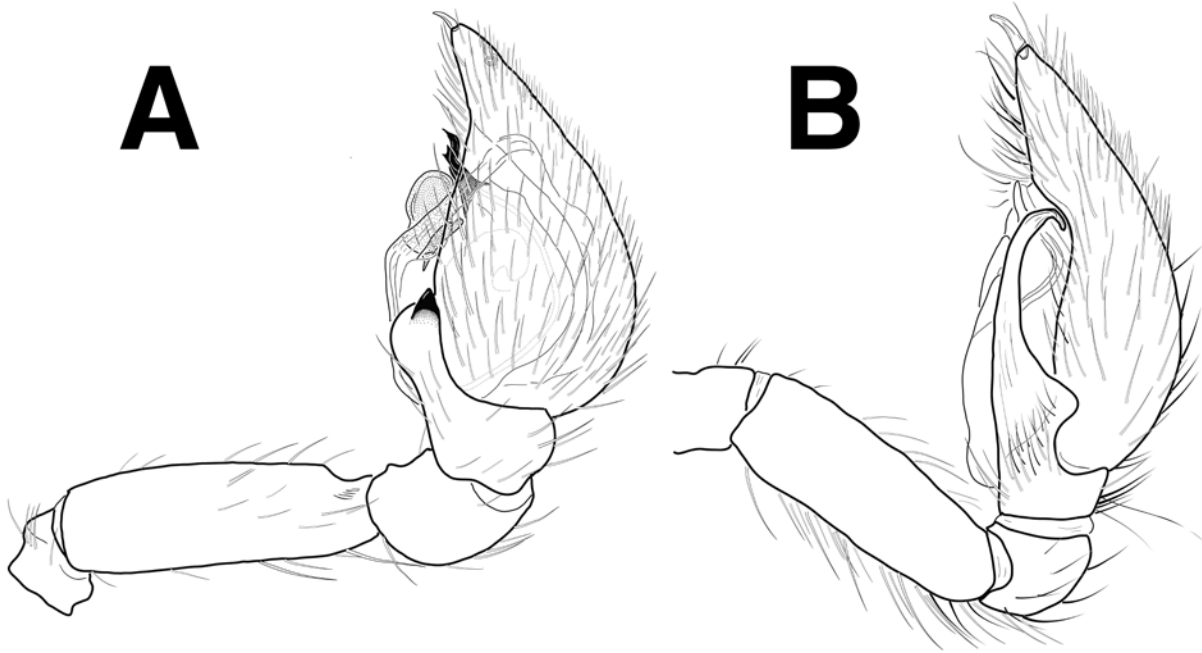


Figure 40. Zodariidae male pedipalps retrolateral. A *Zodarion fuscum*. B *Zodarion rudyi*.