

Figure 1. Juan Manuel (left) and John (right) search for tachinids at Hoodoo Pass on the Montana-Idaho border in the Bitterroot Range of the Rocky Mountains.

Tachinid collecting in the Rocky Mountains of Western Montana, U.S.A.

by John O. Stireman III¹, James E. O'Hara² and Juan M. Perilla López¹

¹ Department of Biological Sciences, Wright State University, 3640 Colonel Glenn Highway, Dayton, Ohio 45435, USA. E-mails: john.stireman@wright.edu, jmperillal@gmail.com

² Canadian National Collection of Insects, Agriculture and Agri-Food Canada, 960 Carling Avenue, Ottawa, Ontario, K1A 0C6, Canada. E-mail: james.ohara@agr.gc.ca

In June of 2017, the Field Meeting of the North American Dipterists Society (NADS) was held at the Lubrecht Experimental Forest in western Montana, U.S.A. NADS field meetings, held every two years, provide an opportunity for the Diptera research community to meet with their colleagues, collect flies in interesting locales, and learn about current research projects of participants during evening talks. Each meeting is held at a different field site in North America that provides access to a variety of habitats for collecting. An overview of the 2017 meeting in Montana, written by the organizer Andrew Fasbender, can be found in [Fly Times issue 59](#) (Fasbender 2017). Here, we report on the tachinid fauna of the area collected by John Stireman, Jim O'Hara and Juan Manuel Perilla López (accompanied by fellow collector and oestroidiphile Greg Dahlem; see the four of us on the cover of this issue of *The Tachinid Times*).

Collecting Sites

Our collecting was conducted in the Rocky Mountains of western Montana, in the vicinity of the city of Missoula (Fig. 2). This region, known as the “Northern Rockies”, is characterized by moderate to high forest-covered mountain ranges (2000–3000m) interspersed with semi-arid grassy valleys. The mountain vegetation is dominated by ponderosa pine (*Pinus ponderosa*), fir (*Abies* spp.), Douglas fir (*Pseudotsuga menziesii*) and other conifers, although the understory and openings host a wide diversity of shrubs, forbs, and grasses (see Lackschewitz 1991 for a guide to the flora). The majority of our collecting was focused around three major sites: Union Peak (Figs. 3, 4), Gold Creek (Fig. 5), and around the Castles Forestry Center of the Lubrecht Experimental Forest (Figs. 6, 11) where the meeting was held.

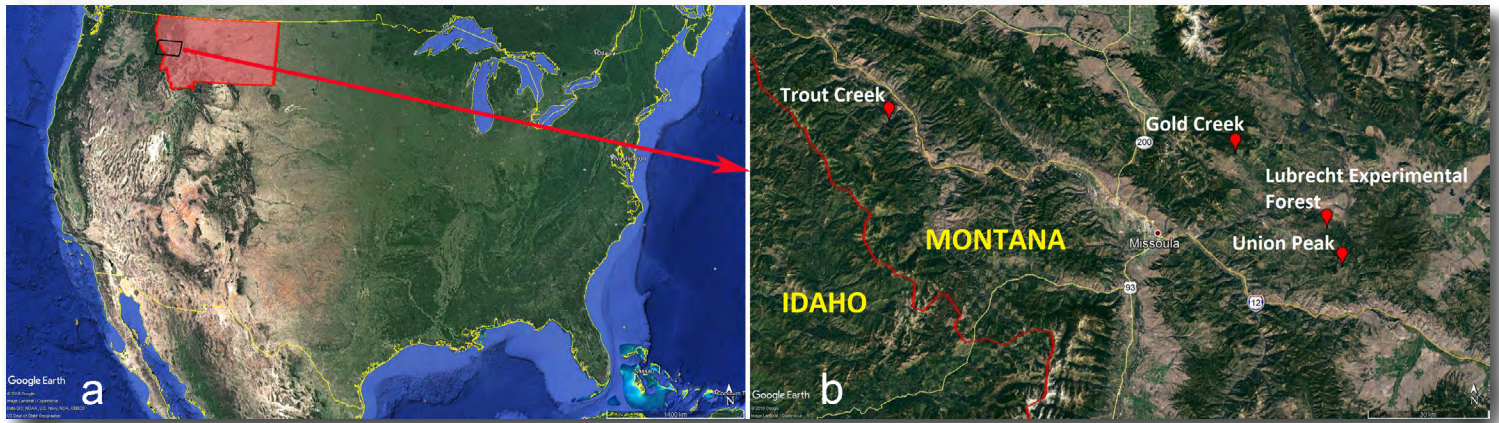


Figure 2. Locations where tachinids were collected during the 2017 NADS meeting in Montana. **a.** Map of the United States with Montana in red. **b.** Enlargement of small rectangle in Montana with the four main collecting locations indicated. Map data © 2018 Google.

Union Peak, Garnet Range

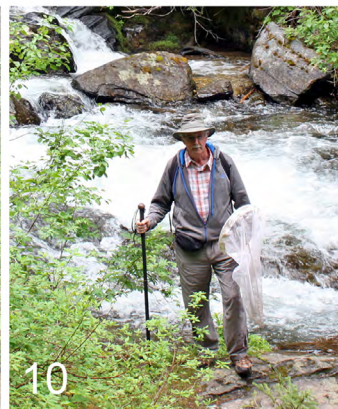
Figures 3, 4.

Soon after our arrival we learned from Andrew Fasbender about Union Peak, a potential hilltopping site a short distance away from the meeting center, and we immediately ventured there in the afternoon of June 26th. Conveniently, this low peak could be accessed by a dirt road nearly to its summit, although the quality of the road became increasingly questionable as we approached the top as evidenced by the punctured tire we had to change near the summit. Atop the summit was a fire-lookout cabin with the area around clear of tall vegetation (Fig. 3), offering a commanding view of the surrounding mountain ranges (Fig. 4). It was fairly active with the buzzing of flies and we collected a number of tachinids, mostly Tachinini (*Tachina*, *Peleteria*), Ernestiini (*Panzeria*) and Dexiini (*Ateloglossa*, *Ursophyto*), as well as some goniines (*Patelloa*, *Gonia*, *Gaediopsis*, *Spallanzania*). We returned to this site the following two days of June 27th (afternoon) and June 28th (morning), with somewhat diminishing returns on the final morning, possibly due to increased windiness and decreased temperatures.

Tachina was the most diverse genus, with about seven species collected at this one hilltop, followed by *Peleteria* with six species. Several *Tachina* (subgenus *Rhachogaster*) species were of a large, shiny black form with orange wing bases, which appear to form a convergent coloration syndrome at high elevations with species of *Peleteria* (e.g., *cornigera* complex, Fig. 15) and *Melanophrys*. Two or three species of *Tachina* (subgenus *Nowickia*) near *latigena* could not be confidently matched to known species and one or more may be undescribed.

Although generally it did not seem that the area possessed an especially rich tachinid fauna, there was an impressive diversity of *Panzeria* species for a single site (5–6 species). We are not certain exactly how many species were present, however, due to difficulties separating and identifying members of the *P. fasciventris-hirta-genalis* complex (Fig. 14). It is unclear if we have one variable species or two and which species they correspond to. Furthermore, it is unclear if the names *P. hirta* and *P. genalis* refer to the same or different species (Tothill 1921). We plan to DNA barcode some specimens to help us sort out the species.

The tribe Dexiini was represented by several specimens of the large, dark-bodied *Ursophyto nigriceps*, which appears to be closely allied with *Ateloglossa*. Of the latter we collected but a single, unidentifiable species. Goniini were represented by several genera including *Gonia*, *Gaediopsis*, *Onychogonia*, *Patelloa* and *Spallanzania*, but with only one species of each genus and few total specimens. Some additional highlights included: *Acemya tibialis* (a first for John), *Bombyliomyia soror* (an unusual ernestiine belonging to a largely tropical group), and *Hemyda aurata* (the only phasiine collected during the trip).



Figures 3–11. 3. Fire-lookout cabin at summit of Union Peak (elevation 2070m). 4. View from summit of Union Peak. 5. Collecting site along Gold Creek road with unidentified dipterists. 6. Main lodge at the Castles Forestry Center in Lubrecht Experimental Forest, with vegetation dominated by ponderosa pine. 7. John changes second flat tire on “Stiretruck” under Juan Manuel’s watchful supervision. 8. *Smidtia fumiferanae* female feeds on sugar solution at Gold Creek road site. 9. John and Juan Manuel on Heart Lake Trail in Bitterroot Mountains. 10. Jim beside Trout Creek along Heart Lake Trail. 11. Jim’s 6-metre trap in a small grove of quaking aspen in Lubrecht Experimental Forest near main lodge.

Gold Creek

Figure 5.

On June 28th, Jim and Greg joined a group that visited the Nature Conservancy's Clearwater Blackfoot project area and surrounding Lolo National Forest in the "Rattlesnake Mountains". Although most of this area was heavily impacted by timber harvesting and fire, Jim and colleagues found a productive roadside area on a slope in the midst of an old-growth section of conifers, near the Gold Creek trailhead. John, Juan Manuel and Greg revisited this site in midday on June 30 (where we experienced our second flat tire! [Fig. 7]). Our collecting here was primarily conducted by walking the roadside and netting tachinids off the leaves of sunlit herbs and shrubs. John and Juan Manuel attracted additional tachinids by "sugaring" leaves with a water/honey/cola concoction.

The most abundant species we collected here was *Smidtia fumiferanae* (Fig. 8), with large numbers of both males and females resting on leaves and sponging up our sugary spray. In just a couple of hours, John and Juan Manuel collected 74 specimens. At some point we gave up collecting more of them, as they were so abundant. This broadly distributed species is the only *Smidtia* species known from North America. We were also able to collect a number of specimens of *Lypha fumipennis* (probably), the ever-present *Voria ruralis* (a species complex), and *Prooppia strigifrons* (Fig. 13). This last species is a new record for the "lower 48 states" of the United States; it was previously known as a Holarctic species with a northern distribution including Alaska and Canada. Several taxa overlapped with those found on Union Peak including *Tachina spineiventer*, *T. ampliforceps*, *Aphria ocypterata* and *Smidtia fumiferanae*, although one species of *Panzeria*, *P. flavicornis*, was found only here. As might be expected, many more females were collected here than at the hilltop site.

Lubrecht Experimental Forest

Figures 6, 11.

The area around the Castles Forestry Center where the meeting was held was relatively level, with open stands of ponderosa pine and small patches of quaking aspen (*Populus tremuloides*) accompanied by a low grassy herbaceous understory with low emergent shrubs and some flowering perennials. A large open mowed field formed the center of the complex of cabins and buildings. Visual searching in this area resulted in the collection of very few tachinid specimens; John and Juan Manuel only ended up collecting a single specimen each (*Eunemorilla alearis* and *Myxexoristops ?fronto*, respectively). However, Jim's 6-metre Malaise trap (Fig. 11), erected between aspens close to the mowed field and within sight of the main lodge, revealed that the area was frequented by a good diversity of mostly medium- to small-bodied tachinid species.

The Malaise trap caught 46 specimens belonging to 23 species over two and one-half days (these comprise all of the CNC specimens from site 3 in the species list below). In addition to several species that were found at other sites, it captured *Admontia degeeriodes*, *Euthelyconychia* sp., *Ceromasia auricaudata*, *Eulasiona comstocki*, *Lydina* sp., *Periscepsia helymus*, *Phebellia erecta*, several species of *Phytomyptera*, and a number of *Siphona* species. There are many undescribed species of *Siphona s.l.* in North America and we appear to have caught two: one has the typical long and geniculate proboscis of subgenus *Siphona* and the other (Fig. 12) is an undescribed and unplaced species examined but not described by O'Hara (1989: 131, as "*Siphona s.l.* New World unplaced sp. 1"). This last species is unusual among *Siphona s.l.* species in having wing vein R_1 setulose distally.

Grizzly Creek/Heart Lake Trail/Hoodoo Pass, Bitterroot Mountains

Figures 1, 9, 10.

On June 29th we ventured with a larger group of dipterists up Trout Creek Road into the beautiful Bitterroot Mountains. We stopped at several sites along this route as the road wound up the canyon to Hoodoo Pass, marking the border between Montana and Idaho. The Heart Lake Trail was particularly beautiful with large old-growth forest, including stands of tall mountain hemlock (*Tsuga mertensiana*), cold mountain streams, and diverse mountain wildflowers. Unfortunately, the weather was cool and overcast, and the fly collecting was extremely poor. Despite this, we collected a few interesting species including *Eumegaparia flaveola* (a first for John), *Pelatachina limata*, and yet another species of *Panzeria*, *P. sulcocarina*. Two additional tachinid specimens were collected by tipulidologist Daichi Kato at nearby Brewster's Creek and generously donated, including *Actia diffidens* and *Lydina* sp. This latter specimen appears to differ from the *Lydina* sp. specimen collected in the Malaise trap at the Lubrecht Experimental Forest, however distinguishing between these taxa is not straightforward and a species complex may be involved (O'Hara 2002).

Overview of Results

In total, we collected 335 individuals of ca. 62 tachinid species over four days of collecting (see list below). This is not a highly impressive number relative to other sites in North America (e.g., 84 spp./308 specimens from the 2015 NADS meeting in Kentucky, O'Hara and Stireman 2016; and 62 spp./139 specimens from the 2007 NADS meeting in New Mexico by one collector, Stireman 2007). Although this modest collection can be explained in part by poor weather and vehicle difficulties, it also likely reflects a relatively low diversity of tachinid species present at moderate to high elevations in the Northern Rocky Mountains. This is expected due to lower vegetational diversity (e.g., trees), which limits diversity of potential hosts (largely Lepidoptera and Coleoptera in this case). Still, the many singletons and doubletons represented in our overall species list hint at a much greater diversity than we actually sampled, and it would likely take several years of sampling to achieve a clear picture of the diversity and composition of the tachinid fauna in this area. In addition, we collected many species that we had not collected previously and several species (*Ateloglossa*, *Siphona*, *Phytomyptera*, *Tachina*) are likely to be undescribed. We should note that many of our identifications remain tentative and require further comparison with reliably identified material and/or type series, and for some of the genera we examined it is clear that additional taxonomic revisionary work and DNA barcoding is needed to assess species limits.

List of Collecting Localities

Tachinids were collected at the following eight sites during the Field Meeting of the North American Dipterists Society held in western Montana in late June 2017. The sites are arranged into four general areas as described below and shown in Fig. 2. Specimens were hand collected except for those captured in Jim's 6-metre Malaise trap set up near the main lodge of the Castles Forestry Center in the Lubrecht Experimental Forest (Fig. 11, site 3).

Union Peak, Garnet Range (Figs. 3, 4)

1. Granite County, Garnet Range, Union Peak summit, 2070m, 46°48.46'N 113°23.94'W, 26–28 June 2017 [collectors J.M. Perilla López, J.E. O'Hara, J.O. Stireman].

Gold Creek, Rattlesnake Mountains (Fig. 5)

- Missoula County, Lolo National Forest, Gold Creek Road, 1700m, 47°03.44'N 113°44.94'W, 28 June 2017 [collector J.E. O'Hara] and 30 June 2017 [collectors J.M. Perilla López, J.O. Stireman].

Lubrecht Experimental Forest (Figs. 6, 11)

- Missoula County, Lubrecht Experimental Forest, 1250m, 46°53.61'N 113°27.08'W, 27–29 June 2017, 6-metre Malaise trap [collector J.E. O'Hara] and 1 July 2017, hand collecting [collectors J.M. Perilla López, J.O. Stireman].

Grizzly Creek/Heart Lake Trail/Hoodoo Pass, Bitterroot Mountains (Figs. 1, 9, 10)

- Granite County, Lolo National Forest, Grizzly Creek Campground, 1240m, 46°34.46'N 113°39.46'W, 27 June 2017 [collectors J.M. Perilla López, J.O. Stireman].
- Missoula County, Lolo National Forest, Brewster's Creek, 1190m, 46°36.69'N 113°38.42'W, 28 June 2017 [collector Daichi Kato].
- Mineral County, Lolo National Forest, Bitterroot Mountains, Trout Creek Road, 909m, 47°06.75'N 114°52.51'W, 29 June 2017 [collectors J.M. Perilla López, J.O. Stireman].
- Mineral County, Lolo National Forest, Bitterroot Mountains, Trout Creek Road, Heart Lake Trail, 1460m, 46°58.61'N 114°58.85'W, 29 June 2017 [collector J.E. O'Hara].
- Mineral County, Bitterroot Mountains, Hoodoo Pass, 1810m, 46°58.50'N 115°01.55'W, 29 June 2017 [collector J.E. O'Hara].



Figures 12–15. Lateral views of four specimens caught in western Montana during the NADS meeting. **12.** *Siphona* undescribed New World sp. 1, unplaced to subgenus (♀, CNC821007, length 3.6mm). **13.** *Proopopia strigifrons* (Zetterstedt) (♂, CNC821057, length 8.0mm). **14.** *Panzeria ?fasciventris* (Curran) (♂, CNC820953, length 10.2mm). **15.** *Peleteria (Panzeriopsis) cornigera* Curran variation 2 (yellow pedicel) (♂, CNC820977, length 12.0mm).

List of taxa and specimens

Listed here are the 335 specimens of ca. 62 tachinid species that were collected in western Montana during the NADS meeting of 2017. Unidentified species are indicated as “sp.” or “spp.” and questionable identifications are preceded with a question mark. A portion of the specimens will be DNA barcoded to provide reference barcodes for future identifications and to help resolve the identities of the specimens that could not be identified with certainty. Specimens collected by John and Juan Manuel (231) are kept in John’s collection (JOS below) at Wright State University. Code numbers are given below for John’s specimens from which legs have been removed and frozen for possible future molecular analysis. Specimens collected by Jim (104) are housed in the Canadian National Collection of Insects (CNC) and have been entered into that institution’s specimen database. The database numbers are given below.

DEXIINAE

DEXIINI

Ateloglossa sp. JOS: Site 1, 3♂♂ incl. JOS617.28, JOS617.30. CNC: Site 3, 1♀, CNC821107.

Eumegaparia flaveola (Coquillett). JOS: Site 6, 1♂, JOS617.39.

Ursophyto nigriceps (Bigot). JOS: Site 1, 10♂♂ incl. JMPL2017.054, JOS617.03, JOS617.38. CNC: Site 1, 6♂♂, CNC820945, CNC820946, CNC820947, CNC820950, CNC820973, CNC820974.

VORIINI

Eulasiona comstocki Townsend. CNC: Site 3, 1♀, CNC821006.

Periscepsia (Ramonda) helymus (Walker). CNC: Site 3, 1♀, CNC821120.

Periscepsia (Ramonda) rohweri (Townsend). JOS: Site 1, 3♂♂ incl. JOS617.21.

Voria ruralis (Fallén) complex. JOS: Site 2, 3♀♀ incl. JOS617.51. CNC: Site 2, 1♀, CNC821077.

EXORISTINAE

BLONDELIINI

Admontia degeerioides (Coquillett). CNC: Site 3, 2♂♂, CNC821011, CNC821014.

Euthelyconychia sp. CNC: Site 3, 1♀, CNC821111.

Unidentified blondeliine: CNC: Site 2, 1♀, CNC821081.

ERYCIINI

Aplomya theclarum (Scudder) complex. JOS: Site 1, 2♂♂ incl. JOS617.34. CNC: Site 1, 2♂♂, CNC820954, CNC820984.

Drino (Drino) ?incompta (van der Wulp). JOS: Site 2, 1♂, JOS617.55.

Eunemorilla ?alearis (Reinhard). JOS: Site 3, 1♂.

Nilea ?sternalis (Coquillett). JOS: Site 1, 4♂♂, 1♀ incl. JOS617.43, JOS617.37.

Phebellia erecta (Sellers). JOS: Site 6, 1♀. CNC: Site 3, 1♀, CNC821104.

Prooppia strigifrons (Zetterstedt) (Fig. 13). JOS: Site 2, 3♀♀ incl. JOS617.56. CNC: Site 1, 1♂, CNC821057. **New record** for the United States south of Canada (previously known as a Holarctic species with a northern distribution, including Alaska and Canada).

EXORISTINI

Exorista dydas (Walker) or *trudis* (Reinhard). CNC: Site 1, 1♀, CNC821058. CNC: Site 3, 1♀, CNC821013.

Exorista trudis (Reinhard). JOS: Site 1, 3♂♂ incl. JOS617.42, JOS617.36.

GONIINI

- Ceromasia auricaudata* Townsend. CNC: Site 3, 1♂, CNC821114.
Gaediopsis setosa Coquillett. JOS: Site 1, 2♂♂ incl. JOS617.20.
Gonia porca Williston. JOS: Site 1, 2♀♀, JMPL2017.052, JOS617.29.
Myxexoristops ?fronto (Coquillett). JOS: Site 3, 1♀, JMPL2017.047.
Onychogonia flaviceps (Zetterstedt). JOS: Site 1, 1♂, JOS617.35.
Patelloa pluriseriata (Aldrich & Webber). JOS: Site 1, 2♂♂ incl. JOS617.08.
Spallanzania ?hebes (Fallén). JOS: Site 1, 1♂, JOS617.11.

WINTHEMIINI

- Smidtia fumiferanae* (Tothill). JOS: Site 1, 6♀♀ incl. JOS617.09, JMPL2017.048; Site 2, 18♂♂, 56♀♀ incl. JOS617.44, JOS617.45, JOS617.46, JOS617.48, JOS617.52. CNC: Site 2, 3♂♂, 4♀♀, CNC821074, CNC821075, CNC821082, CNC821076, CNC821079, CNC821083, CNC821085; Site 3, 2♂♂, 2♀♀, CNC821001, CNC821105, CNC821108, CNC821118.

PHASIINAE

CYLINDROMYIINI

- Hemyda aurata* Robineau-Desvoidy. JOS: Site 1, 1♂, JOS617.24.

TACHININAE

ACEYMYINI

- Acemya tibialis* Coquillett.
JOS: Site 1, 1♂, JOS617.25. CNC: Site 3, 1♀, CNC821012.

ERNESTIINI

- Bombyliomyia soror* (Williston). JOS: Site 1, 1♂, JOS617.40.
Melanophrys flavipennis Williston. JOS: Site 1, 3♂♂ incl. JOS617.02, JOS617.12. CNC: Site 1, 1♂, CNC820981.
Panzeria alberta (Curran). CNC: Site 1, 1♂, CNC821055.
Panzeria fasciventris (Curran). JOS: Site 1, 3♂♂.
Panzeria ?fasciventris (Curran) (Fig. 14). JOS: Site 1, 5♂♂ incl. JOS617.18. CNC: Site 1, 3♂♂, CNC820951, CNC820953, CNC820983.
Panzeria ?flavicornis Brauer. JOS: Site 2, 1♂, JOS617.53.
Panzeria genalis (Coquillett) or *hirta* (Townsend). JOS: Site 1, 9♂♂ incl. JOS617.13, JOS617.14. CNC: Site 1, 4♂♂, CNC820955, CNC820975, CNC820982, CNC820985.
Panzeria nigrocornea (Tothill). JOS: Site 1, 9♂♂ incl. JOS717.07, JOS717.17, JOS717.19. CNC: Site 1, 3♂♂, CNC820972, CNC820979, CNC820980.
Panzeria ?setifrons (Brooks). JOS: Site 1, 1♂.
Panzeria sulcocarina (Tothill). CNC: Site 7, 1♂, CNC821173.

GRAPHOGASTRINI

- Phytomyptera amplicornis* (James). CNC: Site 3, 10♂♂, CNC821010, CNC821015, CNC821017, CNC821018, CNC821019, CNC821020, CNC821021, CNC821022, CNC821023, CNC821024.
Phytomyptera sp. 1. CNC: Site 3, 1♂, CNC821025.
Phytomyptera sp. 2. CNC: Site 3, 2♀♀, CNC821008, CNC821115.
Phytomyptera sp. 3. CNC: Site 3, 1♀, CNC821016.
Phytomyptera sp. 4. CNC: Site 3, 1♀, CNC821009.
Phytomyptera sp. JOS: Site 1, 1♀.

LESKIINI

Aphria ocypterata Townsend. JOS: Site 1, 2♀♀ incl. JOS617.41. CNC: Site 2, 2♀♀, CNC821078, CNC821080; Site 3, 3♀♀, CNC821106, CNC821112, CNC821113.

PELATACHININI

Pelatachina limata Coquillett. CNC: Site 7, 1♂, CNC821174.

POLIDEINI

Lydina sp(p). JOS: Site 5, 1♂. CNC: Site 3, 1♀, CNC821110.

Lypha ?*fumipennis* Brooks. JOS: Site 2, 8♀♀ incl. JOS617.47, JOS617.50.

Lypha sp. CNC: Site 2, 1♀, CNC821084; Site 3, 3♀♀, CNC821109, CNC821119, CNC821282.

SIPHONINI

Actia diffidens Curran. JOS: Site 5, 1♀.

Siphona undescribed New World sp. 1, unplaced to subgenus (Fig. 12) (see O'Hara 1989: 131). CNC: Site 1, 1♂, CNC820956; Site 3, 1♀, CNC821007.

Siphona (Siphona) intrudens (Curran). CNC: Site 3, 2♀♀, CNC821003, CNC821283.

Siphona (Siphona) ?multifaria O'Hara. CNC: Site 3, 1♂, CNC821121.

Siphona (Siphona) sp. 1. CNC: Site 3, 6♂♂, CNC821002, CNC821004, CNC821005, CNC821116, CNC821117, CNC821122.

TACHININI

Peleteria (Oxydosphyria) iterans (Walker). JOS: Site 1, 4♂♂, 2♀♀, JOS617.23, JOS617.15, JOS617.16, JOS617.26, JOS617.27, JMPL2017.049. CNC: Site 1, 3♂♂, CNC820943, CNC820969, CNC820970.

Peleteria (Panzeriopsis) ?cornigera Curran, variation 1 (dark pedicel). JOS: Site 1: 6♂♂, incl. JOS617.06, JOS617.33. CNC: Site 1, 2♂♂, CNC820939, CNC820942.

Peleteria (Panzeriopsis) ?cornigera Curran, variation 2 (orange pedicel) (Fig. 15). JOS: Site 1: 8♂♂. CNC: Site 1, 5♂♂, CNC820941, CNC820977, CNC820978, CNC821054, CNC821056.

Peleteria (Panzeriopsis) cornuta Curran. JOS: Site 1, 1♂.

Peleteria (Peleteria) neglecta (Townsend). JOS: Site 1, 2♂♂ incl. JOS617.10. CNC: Site 1, 1♂, CNC820948.

Peleteria (Sphyrmyia) nr. *malleola* (Bigot). JOS: Site 1, 1♂, JMPL2017.053.

Peleteria sp. CNC: Site 8, 1♀, CNC821281.

Tachina (Nowickia) ampliforceps (Rowe). JOS: Site 1, 1♂, JOS617.04; Site 2, 1♀; Site 6, 1♂. CNC: Site 2, 1♂, CNC821073.

Tachina (Nowickia) prob. *latigena* (Tothill). CNC: Site 1, 1♂, CNC820944.

Tachina (Nowickia) spp. JOS: Site 1, 6♂♂ incl. JOS617.22, JMPL2017.051; Site 2, 1♀, JOS617.49; Site 4, 1♂. CNC: Site 1, 3♂♂, CNC820949, CNC820952, CNC820971.

Tachina (Rhachogaster) ?latianulum (Tothill). JOS: Site 1, 4♂♂ incl. JOS617.31.

Tachina (Rhachogaster) robinsoni (Townsend) complex. JOS: Site 1, 9♂♂, 2♀♀, incl. JMPL2017.050, JOS617.32, JOS617.05. CNC: Site 1, 2♂♂, CNC820940, CNC820976.

Tachina (Rhachogaster) spineiventer (Tothill). JOS: Site 1, 4♂♂; Site 2, 5♂♂ incl. JOS617.54. CNC: Site 1, 1♂, CNC821072. CNC: Site 2, 1♂, CNC821053.

Acknowledgments

We are grateful to Andrew Fasbender (Rhithron Associates, Inc., Missoula, Montana) for organizing the Field Meeting of the North American Dipterists Society in western Montana last year. Andrew directed the group to a variety of excellent habitats at different elevations, all set within the rugged splendor of the Rocky Mountains. Greg Dahlem (Northern Kentucky University, Highland Heights, Kentucky), a sarcophagid expert and friend, was our welcome companion throughout most of the trip. We thank Shannon Henderson (CNC, Agriculture and Agri-Food Canada, Ottawa) for taking the pictures of the tachinids shown in Figures 12–15.

References

- Fasbender, A. (2017) A report from the NADS 2017 Field Meeting at Lubrecht Experimental Forest, western Montana (June 26th–30th). *Fly Times*, 59, 51–57.
Available at: <http://www.nadsdiptera.org/News/FlyTimes/issue59.pdf>.
- Lackschewitz, K. (1991) Vascular plants of west-central Montana – identification guidebook. General Technical Report INT-277. United States Department of Agriculture, Forest Service, Intermountain Research Station. Ogden, Utah. 648 pp.
Available at: https://www.fs.fed.us/rm/pubs_int/int_gtr277.pdf.
- O'Hara, J.E. (1989) Systematics of the genus group taxa of the Siphonini (Diptera: Tachinidae). *Quaestiones Entomologicae*, 25, 1–229.
- O'Hara, J.E. (2002) Revision of the Polideini (Tachinidae) of America north of Mexico. *Studia dipterologica. Supplement*, 10, 1–170.
- O'Hara, J.E. & Stireman, J.O. III (2016) Tachinidae of the Red River Gorge area of eastern Kentucky. *The Tachinid Times*, 29, 13–17.
Available at: <http://www.nadsdiptera.org/Tach/WorldTachs/TTimes/TT29.pdf>.
- O'Hara, J.E. & Wood, D.M. (2004) Catalogue of the Tachinidae (Diptera) of America north of Mexico. *Memoirs on Entomology, International*, 18, 1–410.
- Stireman, J.O. III (2008) Tachinid collecting in southwest New Mexico and Arizona during the 2007 NADS field meeting. *The Tachinid Times*, 21, 14–16.
Available at: <http://www.nadsdiptera.org/Tach/WorldTachs/TTimes/TT21.pdf>.
- Tothill, J.D. (1921) A revision of the Nearctic species of the tachinid genus *Ernestia* R.D. (Diptera). *Canadian Entomologist*, 53, 199–205, 226–230, 247–252, 270–274.
Available at: <https://www.biodiversitylibrary.org/item/22098#page/211/mode/1up>.