

STUDENT NEWS

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I am an entomologist from Colombia (Fig. 1) and since my early undergraduate studies at the Universidad Nacional de Colombia (Bogotá, Colombia) I have been interested in flies. First I focused on fruit flies and later I switched to research on gall midges associated with grasses during my Master's degree at South Dakota State University (USA). I have been interested in the study of tachinids for a number of years but because these flies are not well known in my country I am just now starting to learn about this bristly fascinating world. I began my Ph.D. studies in January 2016 in the Stireman Lab at Wright State University (Ohio, USA). For the past year I have been able to engage in field and museum studies of Tachinidae in the laboratories of Drs. Diniz and Pujol-Luz at the Universidade de Brasilia, Brazil, where I was involved in collaborative projects focused on *Archytas* Jaenicke (Fig. 2) and *Phytomytera* Rondani. I was also able to examine several collections of Tachinidae in Brazil and Colombia during this time.

My Ph.D. research is focused on studying the phylogenetic relationships within the tribe Polideini and will include a revision of the genus *Chrysotachina* Brauer & Bergenstamm. The Polideini are a relatively small tribe in the subfamily Tachininae with about 140 described species, but display a great amount of morphological variation (e.g., body size ranges from about 3 mm (*Lypha* Robineau-Desvoidy spp.) up to 17 mm (*Hystricia* Macquart spp.)), a broad geographic distribution (from the Neotropics to the circumboreal region up to 70°N), a diverse array of hosts (including Lepidoptera, Hymenoptera, Orthoptera, Blattaria, Chilopoda, Scorpiones and Araneae), and contains numerous undescribed species (especially in the Neotropics) (O'Hara 2002).



Figure 1. Juan Manuel collecting flies in a forest clearing near Santa María, Boyacá, Colombia. (Photo by M.A. Perilla Romero)

O'Hara's (2002) work was an excellent modern revision of the Nearctic Polideini and sets the stage for revising the more diverse and difficult Neotropical polideines. In a recent morphological analysis of the Tachinidae by Cerretti *et al.* (2014), the genera *Loewia* Egger and *Petagnia* Rondani are clustered with the Polideini *sensu* O'Hara (2002). However, preliminary molecular analyses support Polideini as a monophyletic group and suggest that this clade is characterized by a rapid rate of diversification (Stireman *et al.*, in prep.).

The New World genus *Chrysotachina* (Fig. 3) is most diverse in the Neotropics and was traditionally recognized by a metallic coloration. However, O'Hara (2002) expanded the genus boundaries to include non-metallic forms, synonymizing the Neotropical non-metallic genera *Exoristopsis* Townsend, *Helioplagia* Townsend and *Neoerigone* Townsend under this name. Revision of these non-metallic *Chrysotachina* is needed to properly evaluate the monophyly and limits of this genus.

Do you have Polideini specimens in your collection or at your institution? If you do, then please contact me! I would love to include them in my phylogenetic and revisionary studies.

REFERENCES

- Cerretti, P., O'Hara, J.E., Wood, D.M., Shima, H., Inclán, D.J. & Stireman, J.O. III. (2014) Signal through the noise? Phylogeny of the Tachinidae (Diptera) as inferred from morphological evidence. *Systematic Entomology*, 39, 335–353.
- O'Hara, J.E. (2002) Revision of the Polideini (Tachinidae) of America north of Mexico. *Studia dipterologica. Supplement*, 10, 1–170.



Figure 2. A male *Archytas* poses for a picture on the author's finger in Brookings Co., South Dakota, USA.



Figure 3. *Chrysotachina longipennis* O'Hara from near Springfield, West Virginia, USA (in J.O. Stireman's collection at Wright State University, Dayton, Ohio, USA).