DSA meeting goes to the Colombian Andes

Cornelio Bota-Sierra, Melissa Sanchez Herrera, John Abbott and David Smith

The 2022 DSA meeting traveled to the tropical mountains, it was held in the Colombian Andes, in the gorgeous forests of the Tatamá National Park and its surroundings (Figure 1). Tatamá is an indigenous word that means the grandfather of the rivers, and these monumental mountains are the place where several rivers are born. This region is very humid, we saw a variety of streams and rivers (Figures 2-3), and weathered everything from the soft cotton fog to really heavy rain (luckily most of it in the afternoons). Tatamá National Park is located in one of the most biologically rich regions in the world, two hot spots converge there, the Chocó Rainforest and the tropical Andes (if you want to learn more about the odonates there, read Bota-Sierra et al. 2019).



Figure 1. The logo for the DSA 2022 meeting, shows the Tatamá mountains in the back and a pair of the endemic *Heteragrion tatama* perched inside the tropical cloud forest. Watercolored by Natalia Uribe.



Figure 2. Montenegro stream. Photo John Abbott



Figure 3. Taiba River. Photo John Abbott

Our base camp was the Montezuma Rain forest eco-lodge, located at 1350m asl-j, a family business, attended by local women, with great Colombian food and access to a variety of streams rivers, and ponds, famous among birders worldwide since around 500 different bird species can be spotted there. Odonates are also very diverse, with 121 species currently known including 28 endemics to the region (Bota-Sierra et al. 2021). A little road goes from the ecolodge to the Montezuma peak located at 2550m asl, and you can also get to the main Chocó road and go down to the foothills in Santa Cecilia at 350m asl (Figure 4).



Figure 4. Río Claro Canyon inside Tatamá NP close to Montezuma Ecolodge. Photo John Abbott.

The meeting was attended by fewer people than expected, but the group was great; everyone had a lot of enthusiasm and love for nature. Among the participants were Seth Bybee, Kendra and John Abbott, and David Smith coming from the USA and Melissa Sánchez, Mayra Saenz, Edmundo Hernandez, Martha Sierra, and Tiberio and Cornelio Bota, plus the local guides Michel and Yesenia Tapasco who share their expertise in birds, orchids, and the regional natural resources while learning the odonates (Figure 5).



Figure 5. DSA Colombia 2022 group. Foto: Michel Tapasco.

On the first afternoon we went walking around the lodge spotting some damselflies, *Polythore gigantea* (Figure 6), *Hetaerina capitalis*, and the highlight was the endemic *Philogenia martae*, a hard-to spot damsel, despite its large size (~6cm in length); its coloration is dark, with a black body and brownish red-bands on the thorax, a yellow smile on the face and a white spot on the end of the abdomen (Figure 7). This species is presently only known from three locations.



Figure 6. Polythore gigantea female. Photo David Smith.



Figure 7. Philogenia martae male. Photo: John Abbott.

On the second day, we took a trip to the lowlands and headed to Santa Cecilia in the Andean foothills. This is a place where the road was opened only 35 years ago, funded by Embera indigenous people and Afroamericans who escaped from slavery a pair of centuries ago. There we crossed the San Juan River (the biggest Colombian River ending in the Pacific Ocean) to get to the Amurrupá river a beautiful tributary where we explored the wetlands around and had a delicious traditional smoked chicken soup (Figure 8). Thousands of libellulids and coenagrionids were flying around, some aeshnids too: *Uracis imbuta, Erythrodiplax andagoya, E. fusca* (Figure 9), *Erythemis attala, Elasmothemis cannacrioides* (Figure 10), *Macrothemis musiva, Tramea abdominalis, T. binotata, Perithemis tenera, Micrathyria ocellata, M. caerulystila* (Figure 11), *Rhodopygia hinei* (Figure 12), *Orthemis sulphurata, Orthemis discolor, Miathyria simplex, Nephepeltia phryne, Dythemis sterilis, D.nigra. Acanthagrion trilobatum, Ischnura ramburii, Argia pulla, Argia talamanca, Argia translata, Argia indicatrix, Argia oculata. Anax concolor, Coryphaeschna adnexa, among others...*



Figure 8. Wood stove at the side of the Amurrupá river. Photo: Martha Sierra.



Figure 9. Erythrodiplax fusca macho. Photo David Smith.



Figure 10. *Elasmothemis cannacrioides* macho. Photo: John Abbott.



Figure 11. Micrathyria caerulystila male. Photo David Smith.



Figure 12. Rhodopygia hinei female. Photo John Abbott

On the third day, we went up the mountain to Montezuma peak, at 2550m asl. It was a beautiful day, but we did not have a lot of sun. We spotted the majestic *Rhionaeschna joannisi, we looked for Oreiallagma oreas* exuviae between the bromeliad leaves, and we looked for nymphs, in a stream at 2300 m asl, where we found some polythorids and *Hetaerina aurora*. It was a day full of beautiful landscapes, birds, and flowers (Figure 13).





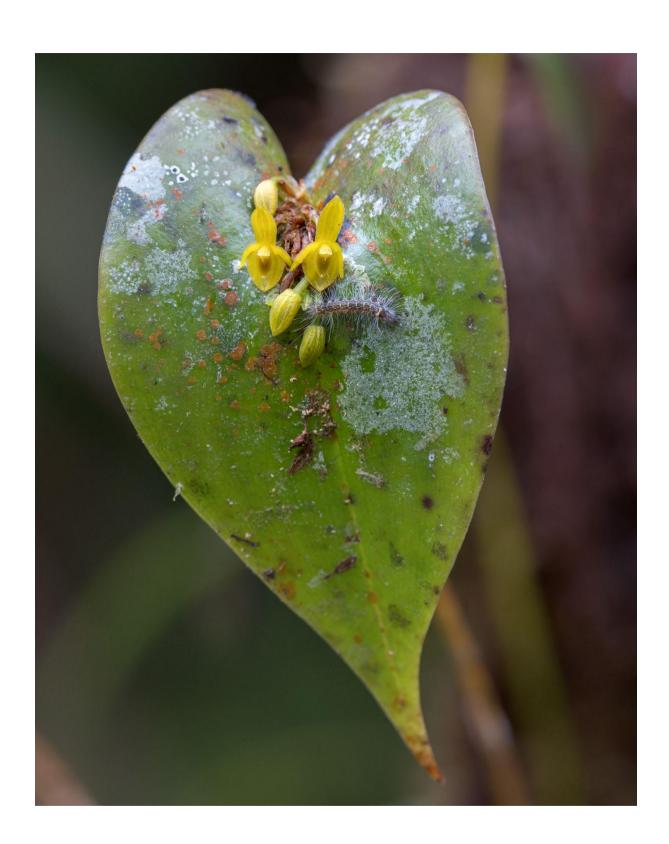




Figure 13. Some Orchids photographed by David Smith.

We spent the fourth day around the lodge where we explored the fish ponds where Mojarra fish are cultured, and that support a nice assortment of dragonflies and damselflies. We found Cannaphila vibex, Macrothemis hahneli, Libellula herculea, Micrathyria sympriona (Figure 14), Erythrodiplax abjecta, E. fusca, Argia medullaris, A. indicatrix, Ischnura ramburii, Orthemis discolor, Tramea abdominalis, Rhionaeschna cornigera (Figure 15), Remartinia luteipennis... Also, we explored a little stream inside the forest (Figure 16) where we found Palaemnema brucelli, P. cf. melanocauda (Figure 17), Miocora aurea, Polythore gigantea, Hetaerina capitalis, and Heteragrion aequatoriale (Figure 18).



Figure 14. Micrathyria sympriona male. Photo John Abbott



Figure 15. Rhionaeschna cornigera male. Photo John Abbott



Figure 16. Stream nearby Montezuma lodge, where several endemic damselflies can be spotted. Photo: Cornelio Bota.



Figure 17. *Palaemnema cf. melanocauda*, female ovipositing on vegetation over a stream. Foto John Abbott

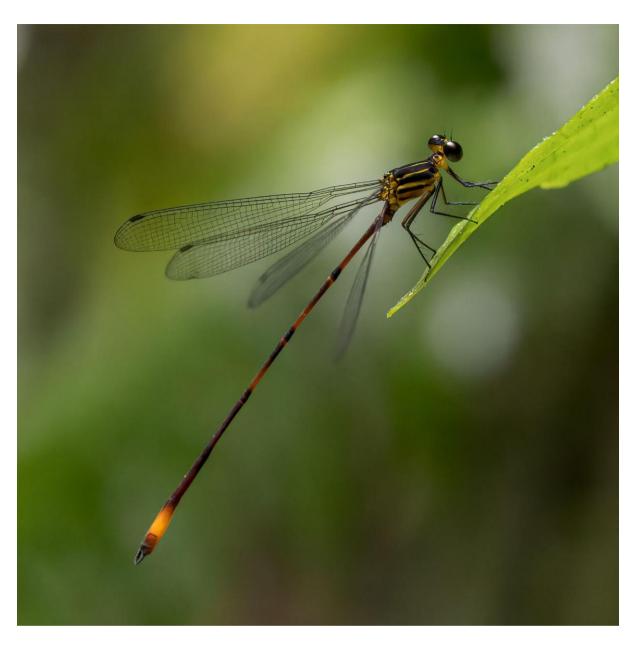


Figure 18. Heteragrion aequatoriale male, Photo David Smith.

It was a remarkable trip! We all enjoyed the mountains, forests, and streams of Tatamá National Park; a place that is going to be in our minds forever (Figure 19).



Figure 19. Tatamá highest peaks reaching 4200 m asl. Photo Cornelio Bota

References

Bota-Sierra, C.A., Sandoval-H, J., Ayala-Sánchez, D., & Novelo-Gutiérrez, R. (2019). Libélulas de la Cordillera Occidental colombiana, una mirada desde el Tatamá -Dragonflies of the Colombian Cordillera Occidental, a look from Tatamá. Bogotá, Colombia. 196 pp.

Bota-Sierra, C. A., Flórez-V, C., Escobar, F., Sandoval, H. J., Novelo- Gutiérrez, R., Londoño, G. A., & Cordero-Rivera, A. (2021). The importance of tropical mountain forests for the conservation of dragonfly biodiversity: A case from the Colombian Western Andes. International Journal of Odonatology, 24, 233–247. https://doi.org/10.23797/2159-6719_24_

Authors

Cornelio is currently a postdoctoral associate from the GEODE project at the Natural History Museum in The University of Alabama. He has been studying Colombian dragonfly biodiversity since 2007. So far, he has numerous new species descriptions and rediscoveries, and has been collecting important ecological, physiological and distributional data for colombian odes. If you want to purchase his field guide or contact him, he can be reached at corneliobota@gmail.com.

Melissa, the DSA president, is an associate researcher in the biology program at El Rosario University in Bogotá, Colombia and at the American Museum of Natural History in New York. She is currently writing manuscripts related to her work among the Neotropical banner damselflies (Polythoridae), and going out to the field to perform eDNA protocols for Neotropical odonates. She can be reached at melsanc@ gmail.com or on Twitter at @melsanc. For more information about Melissa's research, please visit www.polythore.com.

John C. Abbott is chief curator and director of research and collections at The University of Alabama. Contact him at jabbott1@ua.edu or find him online at www.AbbottNaturePhotography.com.

David is a retired molecular biologist with an avid interest in observation and photography of all organisms. He enjoys culturing the beer yeast *Saccharomyces cerevisiae*. David resides in Embarrass, Minnesota, and Alamos, Sonora.