

25 May 2009

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RE: Update #4 on Insect Project.

How quickly a month has gone by. The past week was very busy, with Fred Sibley, our dragonfly expert, leaving on Friday, and Drs. Andrew Cline and Stephen Gamari leaving Saturday. Sibley has reported from New York that after a full accounting, we have managed to collect 21 St. Lucian Odonata species – the last one taken by Mr. Adams Toussaint. Add to that one previously documented species we have not yet recollected, and the suspect Cap species, and the list is 22-23 species. That elusive damselfly species from Cap has not yet been found, but at least 2 Lucians have given credible, accurate descriptions from memory that match it, so we hope to find it eventually. Before he left, Sibley directed others in the team in how to find several suspected missing species.

In a major surprise, Dr. Gaimari, a fly specialist surrounded by beetle people, netted 2 tiger beetles in Escap that did not look familiar. It has been more than a hundred years since the last tiger beetle species was first recorded from the Eastern Caribbean region, yet here was something totally different from all previous records (attached photo no.1). The tiger beetles are the best known group of beetles world-wide, and such a discovery here was totally unexpected. As expected, *Cicindela suturalis* has been found to be common here (attached photo no. 2), even though it is a new island record. Conversely, the other expected tiger beetle species has not yet been found, perhaps because our people do not spend time on beaches, the habitat of that widespread species. A third nocturnal species is considered possible here, but is rarely seen. Yet, jumping over these 2 known Eastern Caribbean tiger beetles, we now have a first-discovery, not just for St. Lucia, but for the region. Just what it is will require more study, but photos sent to tiger beetle specialist Michael Kippenhan have already been compared with the collections and literature at the Field Museum of Natural History in Chicago, and they defy easy identification.

This week we also heard from Dr. Runyon, who is back in his laboratory in the USA and has finished a fast pass through the material he collected by hand. From what he estimated upon departure was about 40 species of Dolichopodidae flies, he has now identified 55 species. Sixteen of these are undescribed species (see attached photo no. 3) – nearly 30% of the total. Yet, the single member of the family actually recorded from St. Lucia is not among them! Mathematical models of species discovery show that to take a sample that included 55 species without finding a single representative of those found in an earlier sample (in this case of only 1 species) is indicative of a truly huge total number yet to be discovered. Runyon has yet to examine the trap samples he took back with neither him, nor the members of that family from Dr. Gaimari's work, nor our other trap samples, so this number is bound to rise.

Showing the unwashed face of biodiversity, Mr. Roger Graveson provided a photo of the catch in one of the traps on Gros Piton, which clearly showed one of the largest longhorn beetles recorded from St. Lucia – our first recovery of that species (attached photo no. 4, thanks Roger). This single trap sample provided several new island beetle records.

Other happenings this week included a very productive meeting on Tuesday with Mr. Lyndon John and Mr. Alwin Dornelly of Forestry. That meeting produced a plan of work for the next 2 weeks. Weekly follow-up meetings are scheduled. Later, in the day on Tuesday, Mr. Adams Toussaint accompanied a film crew from Agriculture to interview members of the team for a program on the inventory project.

To end the week, Ms Crystal Maier, a beetle systematics graduate student at Montana State University, has joined us (on Saturday) and will spend the next 2 months here. She will be responsible for, along with trapping and normal forest collecting, sampling the aquatic beetles on the island. And, at the end of the upcoming week, our largest group will arrive from Utah, under the direction of leaf beetle specialist Dr. Shawn Clark of BYU.



Photo 1. *Cicindela suturalis*



Photo 2. *Cicindela (Brasiella)* sp.

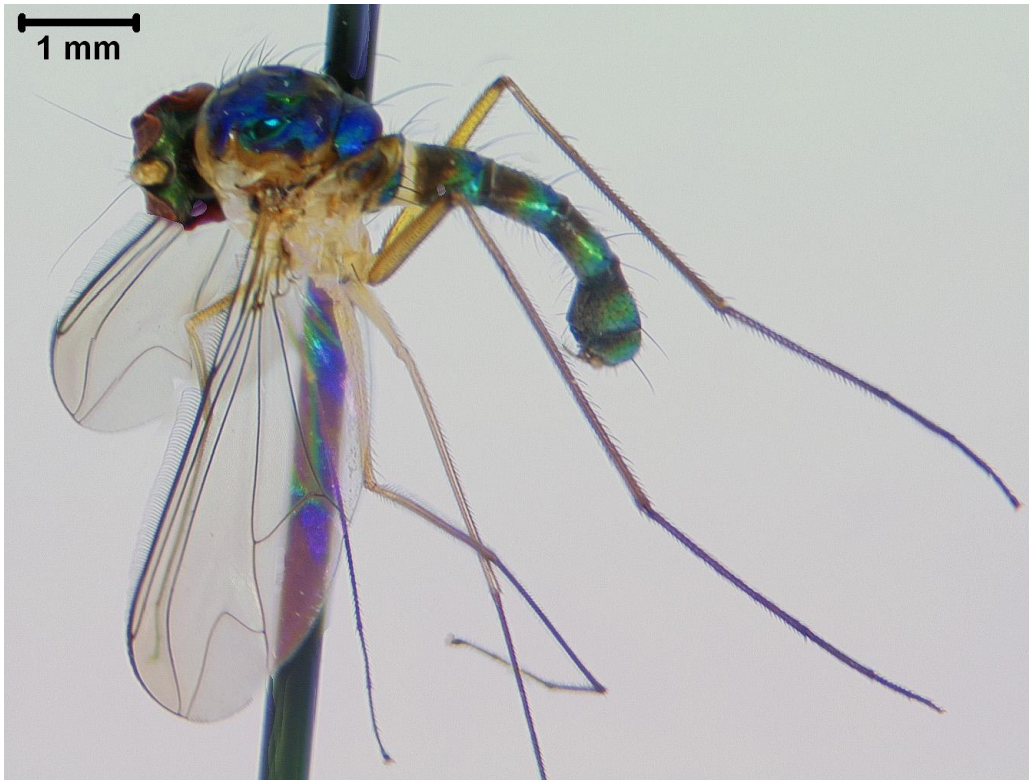


Photo 3. *Amblypsilopus n.sp.*



Photo 4. Inside of Ultraviolet Light Trap on Gros Piton.