

## **Project Update: May 2012**

The last field trips to conduct the cave and epigeal inventories were completed. The environmental activities in the schools were carried out satisfactorily. As requested from teachers of the protected area another encounter was achieved to consolidate the methodology EEPE, an important tool to develop in the students the skills to conduct their own researches, integrating knowledge of different scholar matters and ecological processes of the local environment. In the same way another encounter was made with the young people, they asked by them self this activity to know more about the natural sciences careers. As it was planned, the organic fertiliser or compost production is taking place in the protected area. In the last months some interested farmers in collaboration with the technicians and workers of the protected area designated a place to produce compost; now they are using this fertilizer at a small scale in their own plots but the only problem is that they didn't conducted the comparison with other crops that still use the bat guano as fertiliser. We are still working on this matter because they need to realise by themselves that the compost is much easier to produce and it is much healthier for them than the bat guano, because to obtain the bat guano they need to enter into risky caves and expose them to the infection with the fungi *Histoplasma capsulatum*. During May 2012 a productive encounter with the staff of the protected area was carried out. During this meeting we informed them the new fauna values found in the protected area; also we did particularly emphasise the cave troglobite species of the area and we agreed that it is necessary to increment the protection measurements in the caves that they inhabit.

For the cave La Majana, a hot cave, we detected a large species from the family Elateridae, genus *Pyrophorus* commonly known in Cuba as cocuyo, which constitutes a new record for this cave. On the other hand as a result of the several inventories in this cave, the fact of the absence of the species *Pseudocellus pachysoma*, order Reginulei, *Jimenezella decui*, order Opiliones, *Rowlandius baracoae*, *Cubacantozomus rowlandi*, order Schizomida, neither the isopods *Jimenezia heteroclita*, *Cubanoscia primitiva* would possibly indicate a high level of perturbation in the cave, probably caused by the continuous extraction of guano by the locals. In the case of the species *Jimenezella decui* was found it in the cave Cueva Maximo, a cave very near to the La Majana cave, with a possible connection between them, this could indicate that the species probably passed among the underground spaces through to the galleries of the Maximo cave. Another interesting thing is that the specimens previously determined as *Decuella cubaorientalis* from Los Golondrinos cave and other localities outside caves in Guantanamo province seem to be a different species, probably a new species for the science.

Some observations about the opilion species *Jimeneziella decui* let us know more about their biology. The species seems to be in perfect condition in Los Golondrinos cave, inhabiting the entire dark zone of the cave. We also observed for the first time the feeding behaviour of this blind species. This species uses the second pair of legs as a sensor to detect the prey, when it passes near the appendages and accidentally touch them, then the harvestman catch it. A video of this behaviour was recorded and will be uploaded to RSG website.

The epygean inventories had rendered new data for the fauna composition of the protected area, for example four species of the order Pseudoscorpiones, one of them constitutes a new familial record for the order in Cuba, two species from two different families of the order Opiliones (Kimulidae and *Turquinia* genus, an incertae sedis, probably a new species), the presence of the rare spider species *Alcimosphenus licinus*, not previously recorded from Baracoa, Guantanamo, three species from the family Ochyroceratidae, the scorpion *Heteronebo nibujon*, three species from the order Amblypygi, *Charinus cubensis*, *Phrynus hispaniolae*, *Paraphrynus robustus*, and one uropigid species *Mastigoproctus baracoensis*. Also the entomofauna presented a high diversity in the area, where we found 10 species of Diptera, five species of Hymenoptera, four species of microlepidoptera (moths), and six species of Coleoptera, all of them not previously reported from the locality.

