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Date: Mon, 3 Oct 2005 22:13:20 -0400  
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Subject: letter to Yves Basset re IBSICA  
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4 October 2005

Yves Basset, PhD  
Smithsonian Tropical Research Institute  
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Balboa, Ancon  
Panama City, Republic of Panama

Dear Yves:

I have read with enthusiasm and interest your report on the IBSICA workshop held in Belgium this past July. If only one had the lifetimes to participate in each of these key biodiversity activities as they emerge..... but given my limited lifespan, I decided 30 years ago to focus on one place - Area de Conservacion Guanacaste (ACG) in northwestern Costa Rica. And your initial approach has been on a site in Panama (for obvious good reasons), for which I am delighted - there is huge overlap in both ecological process and in the taxa themselves between ACG and the San Lorenzo-IBSICA site.

Now, your report focuses on, among many things, 1) the use of parataxonomists, 2) getting the taxonomic platform developed, and 3) networking the San Lorenzo-IBSICA site with other sites/projects. Before commenting in more detail on each of these three, let me say that I would be delighted to see our project to inventory the entire ACG Lepidoptera biodiversity (estimated 9,600 non-leaf-mining species), irrespective of how high they live above the ground, be a project formally included in your network of IBSICA projects. The ACG Lepidoptera inventory - formally termed the inventory of all caterpillars, their food plants, and their parasitoids - has just been funded by the US NSF for five more years (\$2.3 m), and has all intentions of continuing until "finished".

1) As the inventors of the parataxonomist concept and heavy users of it to build the Costa Rican national biodiversity inventory, and as present day dependent on parataxonomists (there are 25 in the ACG Lepidoptera inventory), we VERY strongly support the concept of greatly increasing the use of parataxonomists to carry out IBSICA projects. As you well know, being a parataxonomist can be an elegant and stable lifetime career, intellectually rewarding, and greatly increases the overall community-level understanding/involvement of wild biodiversity. At the very least, ACG can offer, just as I am sure can offer the Papua New Guinea parataxonomist teams, being a site of IBSICA-funded apprenticeships for beginning

parataxonomists from the Spanish-speaking world, and inspiration by example to the non-Spanish-speaking world.

2) As people who have been depending on and developing relationships for 45 years between the taxosphere and tropical ecological questions, we are very strongly (and ongoing) conducting taxosphere-inventory processes in ACG inventory (the current array of taxonomists numbers about 40). The ACG Lepidoptera inventory, as well as INBio, as well as the plant, plant virus, vertebrate parasite, and other ACG inventories, are all totally dependent on, and heavy facilitators of, the relevant parts of the taxosphere. As part of this activity, we are very strong facilitators of the emerging process of DNA barcoding for species-level identification and species discovery. In this context, it will often be the case that we are simultaneously working with the same taxonomists that are parts of your and other IBSICA projects. Equally important, the taxonomic tangles that we work out for the ACG species will generally apply to, and help, any other inventory project in the Neotropics. All our results are publically available on the project web site (<http://janzen.sas.upenn.edu>). Very specifically, we will of course be very pleased to integrate any part of our on-going taxonomic process that is relevant with the same process for IBSICA projects, and equally, would be delighted to be able to co-see funding that will build the taxosphere in support of your and our project. Incidentally, since we are focused on caterpillars, with the adults being a byproduct, we are delivering a taxonomic expertise that is extremely poorly developed in the Neotropics, but is very central to your IBSICA questions, both with respect to this dominant and prominent feeding stage, and their parasitoids.

3) The "Caterpillar inventory of ACG" project as a funded and populated activity, as a whole, will be pleased to be a node in any network you develop. This statement is meant two ways. First, it is meant to emphasize that we firmly support the IBSICA concept of taking a place and working out the diverse ecological relationships on that site. While we have focused on caterpillars at ALL levels, not just "the canopy", we have no intellectual conflict with structuring the sampling around questions heavily focused on vertical and horizontal stratification, along with the many other ways to cut through the same community structure. Second, our "willingness" to structure around the IBSICA array of questions is funding-driven. If grant support can be obtained from your funding sources to add in more parataxonomists to conduct more sampling structures that are directly parallel to yours, we will be very pleased to add them in. Currently, we conduct what we can get funding for from NSF - that is the straightforward question of what species are there, what things do they eat, who parasitizes them, and what are their seasonal phenology and local migration patterns - and of course, we generate a very large number of new species in the process. This activity of course spins off many lateral "ecological-behavioral-evolutionary" inquiries, but we have refused to be sidetracked by them, in the name of actually completing the inventory (which has never been done for any tropical area anywhere in the world).

So, having said all this, we strongly support your efforts to find more IBSICA funding, feeling that it is money very well spent. Second, we will be pleased to bring our experiences and results to the table as participants, and wish you every bit of success in finding funding that can be spread among different actual or potential IBSICA projects, including ours. Please let us know if there is any specific action other than this letter that you need from us. I attach to an adjacent e-mail a recent publication on the trials and tribulations of using DNA barcoding for species identification and discovery in the project, and attach to a second e-mail a copy of our recently-funded NSF proposal as a kiind of background document.

Sincerely yours

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