

## Amphibian research in Trinidad and Tobago

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The BLB bequest generously awarded me £700 to work on several projects in T and T during June-July 2015. The visit was successful but did not always go to plan! The dry season had been particularly severe and, although there had been a few showers before I got there on 9<sup>th</sup> June, there was no standing water, ditches were dry and streams normally flowing at that time of year were merely a few isolated puddles. Fortunately, some wet days followed soon after I arrived and over the next four weeks I was able to make good progress, but not on all of the planned work: as follows:

1. Paradoxical frog escape responses: we heard these frogs calling near the end of the trip, but saw no tadpoles, so this work will need done another time...
2. Pollution and agrichemicals; the colleague planning to pilot this project with my assistance was unable to come after all, so, another project for the future...
3. Tadpole-mosquito interactions; the student intending to work on this had already set out water basins in a range of likely sites by the time I arrived, but no mosquitoes had laid in them, nor had done so a week or so after I arrived (and, because of the severity of the dry season, mosquito numbers were generally low). We decided to abandon this project, since the student's time was limited, and to switch to something different. This was a project on competitive interactions between two species of tadpoles often found together in temporary pools, and he has been able to complete it successfully. Results to be analysed over the autumn.
4. Behaviour of newly metamorphosed tree frogs: this project depended on finding well developed tadpoles as early as possible. Again, because of the severity of the dry season, there were no tadpoles around, and we only began to see some species towards the end of my visit. This meant a need to switch this project too. The student worked instead on the behaviour of the Trinidad stream frog, especially territoriality and boldness in relation to variation in throat colour (the females have bright yellow throats that they use in social signalling); again, the results will be analysed over the autumn.
5. Glassfrog hatchling behaviour: the dry season in Tobago was even more severe than in Trinidad, and we saw no glassfrog adults in the first few weeks. However, the habitat (forest streams in north-east Tobago) looked in good condition and when the rains came in early July, glassfrogs appeared and were soon breeding; the student was able to locate egg clutches and later study hatchling behaviour.
6. Tadpole surfacing and respiration: soon after arrival, I was able to locate toad spawn of two species and two kinds of frog spawn for this project, carried out by Katie O'Neill and Patrick Walsh, so that when Patrick (separately funded by the BLB bequest) arrived, he could concentrate on ensuring that the project progressed smoothly.
7. In addition, a) I collected and developed several tadpole species for a comparative study on the relationship of development to growth: data to be analysed this winter;  
b) I investigated a major site, new to our expeditions, at Aripo Savannah, as a contribution to work on frog distribution in Trinidad, which will feed into a new book;  
c) I assisted/advised on projects on tree-frog basking behaviour and litter frog populations.

Conclusion: Although the work done did not go fully as planned, many useful observations were made, showing yet again that it is necessary to take a flexible approach to project planning in T and T, and how valuable it is to have a group of students who can supplement the observations made by a sole worker and over an extended period.