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The Status of the Amphibian Community in the Luquillo Experimental Forest

Lawrence L. Woolbright

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Bob -

A while back you had asked for a $\frac{1}{2}$ page blurb on the video for CTER network. I suggested that you copy this from the 1/97 annual meeting book, but if you didn't, here it is. Cheers.

A large, stylized handwritten signature, likely belonging to Dr. Larry Woolbright, consisting of a single, continuous, flowing line.

The Status of the Amphibian Community in the Luquillo Experimental Forest

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One of the ongoing goals of the project is to quantify changes in the animal community of the LEF through time. Towards that end I have established a variety of standard methods to monitor the appreciable amphibian component of the biota. These include four 400 m² plots, established in 1987 in the El Verde and Bisley study areas, that allow tracking individually marked adults via mark-multiple-recapture methods; auditory transects, begun in 1988 both at El Verde and Bisley, that record the composition of the local anuran chorus; and nocturnal auditory censuses of the grids at El Verde and Bisley to determine whether local results are general to the study areas. The results of these studies can be compared internally to themselves as well as to the wealth of information available on the amphibian community of the El Verde site since the early 1960's.

The major result of this work has been to document a 50% decline in species richness of terrestrial amphibians. Of six species of *Eleutherodactylus* that were relatively common in the area surrounding the El Verde Field Station in the 1960's and 1970's, three no longer occur in either study area. *Eleutherodactylus eneidae* disappeared some time around 1980, and both *E. portoricensis* and *E. richmondi* disappeared in 1990. Because the area has been protected during the entire period spanned by these data, local extinctions do not appear linked to any specific human activity. These results have been accepted for publication in the Journal of Herpetology, pending revisions to the manuscript.

With the exception of the three species noted above, which have been absent for periods of time that exceed their life spans, and thus can be concluded to be locally extinct, it is premature to draw conclusions about meaningful changes in relative abundance of the rest of the community. Earlier studies typically cannot be directly compared to the measurements being recorded now, but can only establish what species were present at what times. As the collection of current data sets continues, I expect to be able to speak more directly to questions of normal ranges of fluctuations among amphibian communities and what level of change allows for significant conclusions to be drawn.