

THE ANURA (AMPHIBIA) OF RIO UPANO VALLEY OF EASTERN ECUADOR

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ABSTRACT

This manuscript describes taxonomic work on the anuran fauna of several localities in the Rio Upano Valley of Eastern Ecuador. The multifold significance of the project is documented and the work of other investigators is discussed.

INTRODUCTION

The anuran fauna of the Upano Valley comprises, to date, 11 genera and 25 species, a taxonomic diversity inferior to that of Santa Cecilia, Province of Napo, in the adjacent tropical lowlands. Approximately 24 genera and 81 species are known to occur at Santa Cecilia (Crump, 1974).

To our knowledge one genus (*Adenomera*) and two species (*A. hylaedactylus* (Cope) and *Colostethus bocagei* (Jimenez de la Espada) have not been reported previously from eastern Ecuador. The remaining nine genera and 23 species have been encountered at Santa Cecilia (Crump, 1974). Moreover, the Upano series appear to be conspecific with the lowland populations. Species of Andean provenance were not obtained in the Upano valley. Unquestionably, the Upano valley will yield a greater diversity of species with continued intensive investigation.

Paralleling the Andean escarpment, the Upano valley is partially isolated from the eastern lowlands by the Vieja Cordillera de Cutucú (Fig. 1). Immediately south of the confluence of Rios Upano and Paute the valley is narrowly contiguous with the Amazonian lowlands. Within the valley, base elevations decrease from 1,000 meters near Macas to 914 meters at Méndez. In the greatest length, the Upano valley is 80 kilometers with a maximum width of 20 kilometers.

The lower slopes of the foothills and the western flanks of the Vieja Cordillera de Cutucú are characterized by Tropical Evergreen Rainforest (Rumney, 1968). Scattered remnants of the indigeneous vegetation are extant on the valley floor. Extensive agriculture and cattle husbandry have drastically altered the floristic aspect.

The documentation of the Anura of the Upano valley is of multifold significance: (1) elimination of a biogeographic hiatus in Amazonian Ecuador, (2) establishment of a basis for studies of faunistic changes in a highly disturbed area, and (3) comparison of variation within geographically isolated populations and lowland conspecifics.

In a previous report (Fugler and Walls, *in press*, Journ. Tennessee Acad. Sci.), it was noted that certain snake populations in the Upano valley exhibit infra-

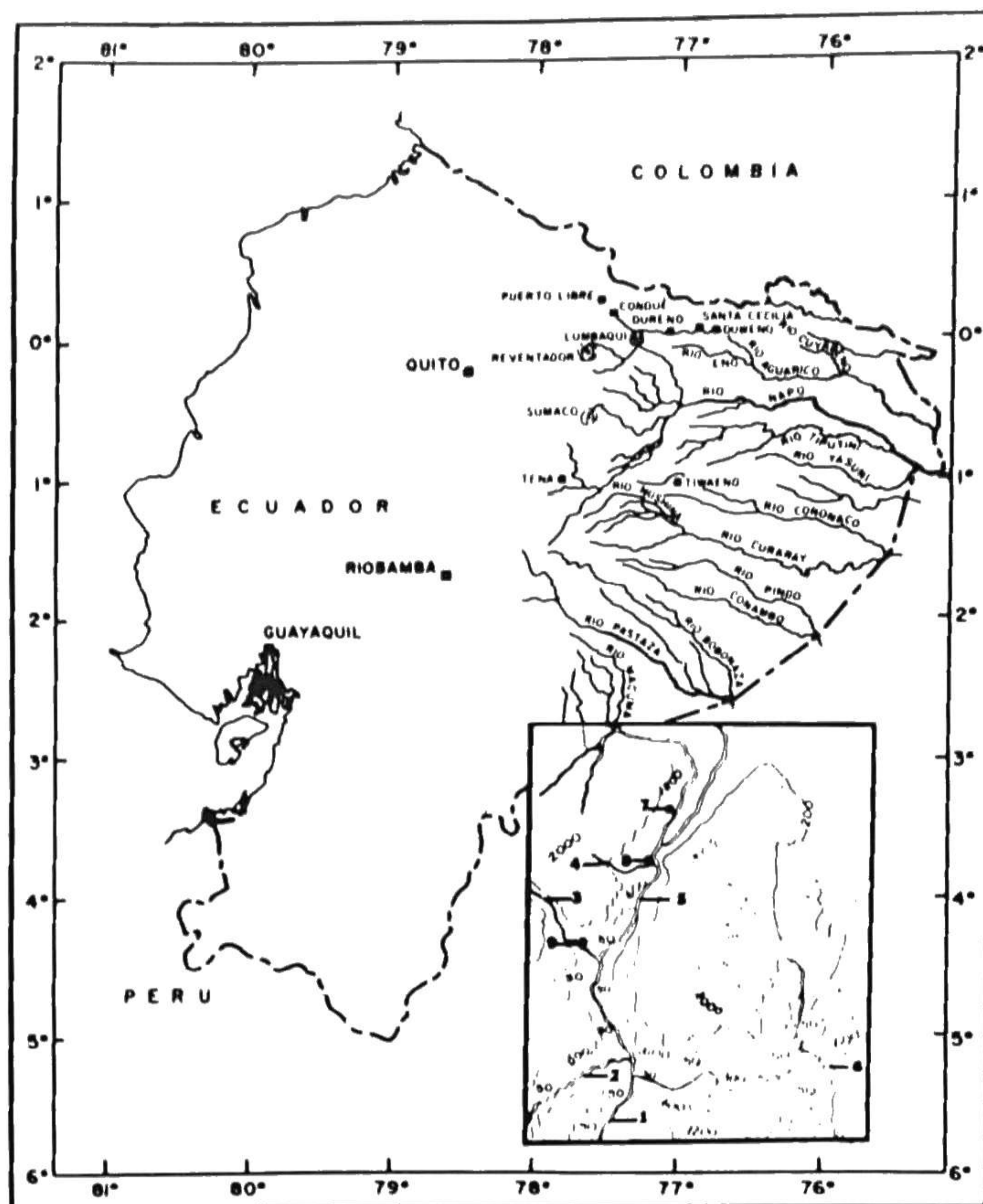


FIG. 1. Map of Ecuador and the valley of Rio Upano (inset): Key to numbered localities: 1- Río Coangos 2- Río Zamora 3- Río Paute 4- Río Tutangoza 5- Río Upano 6- Río Santiago 7- Macas 8- Sucúa 9- Méndez. Localities cited in text but not included on map: Sevilla Don Bosco (E bank of Río Upano opposite Macas); San José (5 kms. SW Sucúa).

taxonomic divergence from the populations of the adjacent lowlands. Although similar divergence is not observed in the anuran populations, upon the accumulation of adequate series from the Upano valley, such differentiation may exist. Series of apparently undescribed species of *Eleutherodactylus* and *Hyla* are being studied by specialists in the group.

ACCOUNTS OF SPECIES

The taxonomic allocations have been determined by Dr. Shreve of the Museum of Comparative Zoology, Harvard University. With certain exceptions, these determinations are followed. The arrangement of the species is alphabetical.

The specimens discussed hereinafter are deposited in

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THIRD TARDIGRADA SYMPOSIUM SET FOR 1980

The Third International Symposium on the Tardigrada will be held August 3-6, 1980, at East Tennessee State University, Johnson City.

Topics include the history and future of tardigrade research, ultrastructure of tardigrades, population dynamics and ecology, cytology, species diversity, and the application of electron microscopy and other contemporary techniques to tardigrade systematics.

Invited papers, contributed papers, workshops, discussions, and field trips are scheduled.

For further information, contact the convener, Dr. Diane R. Nelson, Department of Biological Sciences, East Tennessee State University, Johnson City, TN 37601.