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# The Conservationist Newsletter

## St. Louis Zoo's Field Research Conservation Program

From lemurs in Madagascar to piping guans in Trinidad, as part of the Saint Louis Zoo's new Field Research Conservation (FRC) Program, the staff is participating in conservation projects for endangered species. Initiated in 1997, the FRC program is designed to enhance the Zoo's conservation mission by supporting studies of endangered species in their native habitats.

The investigations are collaborative efforts between Saint Louis Zoo staff members and researchers at other institutions. The program takes advantage of the diverse interests and expertise of the in-house staff by focusing on areas of geographic and taxonomic interest to the Zoo. It is expected that the findings from each study will be published in an appropriate scientific journal. To date, 15 projects have been submitted and reviewed by a Scientific Advisory Board comprised of representatives of area universities. Each project is evaluated on the basis of its scientific conservation merits, its relationship to the Saint Louis Zoo, and whether it has been recommended by the American Zoo and Aquarium Association's Species Survival Plans (SSPs), Taxon Advisory Groups (TAGs) or Fauna Interest Groups (FIGs), or by other conservation groups.

Eight of the 15 submitted proposals have been selected for funding. They are an eclectic group of investigations representing:

- Collaboration by seven Zoo staff members
- Conservation studies on more than seven species of animals (ringtail lemurs, Trinidad piping guan, Jamaican iguana, Somali wild ass, black rhinoceros, Pohnpei (and indirectly Micronesian) kingfishers and a variety of native Nicaraguan species).
- Field work in 10 countries (Eritrea, Guam, Jamaica, Kenya, Madagascar, Namibia, Nicaragua, South Africa, Trinidad and Zimbabwe),
- Cooperation with 11 researchers at nine different universities, conservation organizations, and govern-

ment agencies (Fort Worth Zoo, Idaho State University, IUCN/SSC Equid Specialist Group, Rhinoceros Management Group (South Africa), Washington University-St. Louis, University of the West Indies, University of Wisconsin, USGS Forest and Rangeland Ecosystem Science Center).

It is an exciting time as many projects are just starting and others have reached completion of the field work phase. At the time of publication, Jan Dempsey, the Zoo's nutritionist, has visited Jamaica and collected plant samples for her study on the nutrition of the island's native iguana, and the survey of the population of critically endangered Somali wild ass is planned in Eritrea.

In the future, Zoo staff members will be able to submit proposals to the FRC Committee on a twice-yearly basis.

### *This Year's Projects Are:*

#### **A Survey of the Habitat of *Lemur catta* (ringtail lemurs) in Southern Madagascar**

*Zoo Collaborator:* Ingrid Porton, curator of mammals/primates

*Relationship To Study:* Ingrid is the Chair of the Prosimian TAG

*Cooperative Researchers/Institutions:* Dr. Glenn Green/Indiana University and Dr. Robert Sussman/Washington University-St. Louis



Ringtail lemurs

Photo courtesy of Ingrid Porton

## Evaluating Black Rhinoceros Health: The Real Poop

Normally, one would expect a study on the nutrition of an animal to start by looking at what is ingested. But the Saint Louis Zoo's Field Research for Conservation (FRC) fund is supporting a project that flips that expectation to the other end by studying the nutrition among highly endangered black rhinoceroses (est. pop. 2,500) by dung analysis.

Although studying this matter may appear to be a seemingly odd focus for a conservation effort on behalf of this animal, dung's the basis for Keryn Adcock's research project.

Adcock, a member of the Rhinoceros Management Group of Southern Africa, has already amassed dung samples from 22 parks and ranches in South Africa, Swaziland, Namibia, Zimbabwe and Kenya. These collection points represent a wide spectrum of the ecological zones inhabited by the black rhinoceros.

Why dung? Think of it as a "fast track" among analytical processes. Attempting to catalog and analyze the nutritional content and value, as well as the amount consumed, of each of the dozens of plants that rhinos eat each day within any one of the zones in which they live, is a Herculean undertaking, at best. For this study, rangers simply collect samples (which are rarely in short supply) from various areas, some from animals of known sex and age. The samples are sent to the Cedara laboratory in Natal Province where they are dried and analyzed. A portion of the FRC's funding assisted with the purchase of analytic equipment.

This dung is analyzed to determine the levels of nitrogen, phosphorous, calcium, copper and iron, among other nutritional elements, in the black rhino's diet. Knowing these levels may help find a key to successful management of this species. It is known, for example, that low levels of phosphorous among many species of wildlife can be a major factor that limits the growth of populations.

The project's nutrient study results will be analyzed and compared with rhino population densities and breeding success in each of the ecological zones from which dung has been collected. That data will then be used to create scientific measures to estimate the zones most likely to

assure the success of the future rhino translocation projects.

Through this project, the Zoo's FRC program is supporting this study that seeks to monitor the herd health of wild black rhinoceroses and provides data that may help determine its future range. While this project may seem somewhat odorous, in fact it offers a fascinating chance to test the hypothesis that what comes out reflects what went in: that the nutrients found in dung will reflect those available for ingestion in any particular environment (kind of like "leftovers"). Although starting only with lowly dung, it is hoped that the project will produce significant impact on the conservation management of this endangered species.

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Photos courtesy of  
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