

## GAINING ACCESS TO BIOLOGICAL MATERIAL FROM BRAZIL

Brazil contains the highest biodiversity on Earth, which has since long attracted the attention of the scientific community. However, of the 4,587 taxonomists currently registered at the World Taxonomist Database (by mid-April 2009), 989 were located in the United States, 214 in the United Kingdom, and only 196 in Brazil. If half of these taxonomists worked on plants, this would mean that in Brazil (with an estimated 55,000 plant species, <http://earthtrends.wri.org>) each taxonomist would have to be in charge of studying some 560 species. This could be compared to the United Kingdom (~1,550 species), where the flora has already been extensively documented, but still each taxonomist would have to deal with no more than 14 species. This discrepancy has led many scientists in developed countries to focus their research interests in tropical regions.

Despite this gap, the last years have evidenced a much contrasting development of the regulations controlling the access and transfer of biological material from Brazil in general, and Amazonia in particular. In order to evaluate the problem of access to biological materials for research purposes described by Revkin (2002) and Vale & al. (2008), we recently launched a worldwide survey (Antonelli & Rodriguez, 2009).

The survey questionnaire, which is still open to academicians who have conducted research in Brazil, is available at [www.systbot.uzh.ch/static/brazil/questionnaire\\_form](http://www.systbot.uzh.ch/static/brazil/questionnaire_form) and preliminary findings are presented here. Responses obtained so far account for both positive (44) and negative (39) experiences. Four general trends are noteworthy. First, the majority of permits involved research grants obtained by university researchers at national level. Second, about 47% of the entries were focused on obtaining permits for studying rainforest ecosystems (Amazonia and the Atlantic rainforest). Third, most applications concerned collecting permits. Fourth, more permits dealt with larger taxonomic groups (families, genera) than single species.

Generally, applying for permits seems to be successful despite negative experiences. Although research projects usually involved Brazilians and non-Brazilians, more project coordinators were Brazilian nationals. When permits were granted, duplicates of the material were required (by law) to be deposited in Brazil. If denied, the authority asked for charges, refused to renew the permit, or prosecuted the researcher. The setback was reported to other administrative authorities or to the researcher's organisation. The financial consequences of the setback comprised in two cases the end of a research grant. Moreover, the career consequences included delay in completing doctoral theses or getting tenure.

Even though our survey is primarily academic, the subject is controversial, and the study could be viewed through a North-South prism. The subject of Brazilian collecting permits being a hindrance to research is a topic already being fought out between the Brazilian Botanical Society and the Brazilian Environmental Ministry. The aim of this survey is to provide further evidence on this issue, by gathering personal reports and opinions from the scientific community. We ultimately hope that these accounts will enrich the negotiations in the next meeting of the Conference of the Parties within the Convention on Biological Diversity, to take place in Nagoya, Japan.

### Literature cited

- Antonelli, A. & Rodriguez, V. 2009. Brazil should reconsider biorestrictions. *Conservation Biology* (in press).
- Revkin, A. 2002. Biologists sought a treaty; now they fault it. *The New York Times* 7 May 2002: F1.
- Vale, M., Alves, M. & Pimm, S. 2008. Biopiracy: conservationists have to rebuild lost trust. *Nature* 453: 26.

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