

## New free software helps identify key areas for environmental protection

A new open-system software package for the analysis of geographic distribution of animals and plants was launched this week by Conservation International (CI) in Brazil. This innovative technology will help the scientific community identify priority areas for environmental conservation based on geographical patterns of species.

Croizat uses a panbiogeographic approach, one of the main areas of research of biogeography, which is the study of the distribution of living creatures on our planet. Before the software was launched, there was no standard, general-purpose software for the analysis of distributional data under the panbiogeographic method, which was created by the Franco-Italian botanist Léon Croizat (1894-1982).

The idea behind panbiogeography is that biotas, or the total of animals and plants in a particular area, evolve through geography barriers. "The panbiogeographic method in which this software is based views patterns of distribution of species as a fundamental aspect of biodiversity," says Croizat's main developer, Mauro Cavalcanti, adding that the identification of these patterns help to single out areas that are both highly rich in species and historically important in terms of evolution and distribution of biotas.

The Croizat is based on the same analytical model of many Geographic Information Systems (GIS), but rather than concentrating on database and graphics flexibility, the Croizat is designed to perform specialist biological analyses, many of which are not available from GIS's.

For José Maria Cardoso da Silva, Conservation International's Vice-President for South American, this technological innovation is crucial to the identification and protection of areas rich in biodiversity. "By launching the Croizat, CI intends to disseminate scientific knowledge for free and to all the researchers in the field of environmental conservation," he said. "This is top-notch software that will contribute greatly to the planning of conservation actions."

The program is written in Python ([www.python.org](http://www.python.org)) – an interactive, object-oriented programming language -- coupled with the portable, multi-platform wxPython interface management library, and other free external libraries also written in Python and C/C++ (NetworkX, PIL, NumPy, Matplotlib and its Basemap module). The Croizat is platform-independent, and should run on any PC compatible with x86 architecture, under GNU/Linux, Mac OS X, and MS-Windows.

The Croizat can be downloaded at <http://panbiog.infobio.net/croizat>

Source: [iNSnet](#) at [http://www.insnet.org/ins\\_headlines.rxml?id=39392&photo](http://www.insnet.org/ins_headlines.rxml?id=39392&photo)