

2003 GBIF Science Symposium

2 May 2003, 0800 – 1700

København Universitet Alexandersalen
Bispetorvet, København

Founding the Future: On the Rock of Real Data or the Sands of Speculation?



This GBIF Symposium is about the advantages of basing management decisions and scientific opinion on real data in digital form. It will be introduced from a global, scientific and political perspective by a visionary scientist-politician, Dr. Cristián Samper.

The Global Biodiversity Information Facility (GBIF) was established in 2001 to take on a unique task: To make it possible for policy- and decision-makers, research scientists and the general public—worldwide—to electronically access the world's supply of primary scientific data on biodiversity. These data are based on actual specimens in natural history collections, and when correlated with geographical data, provide robust answers to policy, management and scientific questions.

On the world stage, most players have become more and more concerned about the endangerment of the ecological and economically important services provided to humanity by biodiversity. Those concerns have led to the Convention on Biological Diversity and its Clearing House Mechanism for information on biodiversity policy, to the UN's Man and the Biosphere project, to the DIVERSITAS consortium led by the International Union of Biological Scientists, and to many other efforts at "conservation through information" led by governmental and nongovernmental organizations around the world.

Within this panoply of organizations, many have been tasked to develop analyses of the status of biodiversity and ecological function, others to advise international governmental bodies on how to balance the needs of humans with those of the preservation of biodiversity, and still others with properly managing and studying such pristine ecological preserves as remain on the planet. All have done their best to present factual information, but most have relied on secondary sources as the basis for their reports. Worse, some of these reports have been based only on speculative evaluations provided by consultants.

Even with all the calls for information on which to base decisions, *the richest source of scientific information about biodiversity*—the world's natural history collections and the

associated library materials—*has remained essentially untapped*. Even research scientists who study biodiversity have been limited in their ability to understand its complexity because most of the data are not digital.

This symposium is designed to demonstrate the power of digital natural history specimen data, to show how important it is that GBIF continue its efforts to encourage digitisation and equitable sharing of these data.

Speakers in the 2003 GBIF Science Symposium

The Symposium will be introduced by **Dr. Cristián Samper**, recently appointed Director of the U.S. National Natural History Museum (part of the Smithsonian Institution), who started and served as the first Director of the Alexander von Humboldt Institute in Bogotá, Colombia. He has also served as the Chair of the Subsidiary Body for Scientific, Technical and Technological Advice of the Convention on Biological Diversity. Dr. Samper is well known as a visionary leader, skilled negotiator and inspiring speaker.

Dr. Jorge Soberón, Head of Delegation from Mexico to the GBIF Governing Board and Executive Secretary of the Consejo Nacional de la Biodiversidad (CONABIO). The research that Dr. Soberón and his colleagues conduct illustrates the vital role of specimen data in conservation biology, in land use policy, and in the process of addressing the challenges of global change. His title for this symposium talk is Occurrence, occupancy and niches: The power of specimen data.

Dr. Takeshi Sagara, of the Center for Information Science of the University of Tokyo, is a well known computer scientist who has developed gazetteers and tools that allow ambiguous geographical name searches, which has been extremely useful to the elucidation of species distributions. These tools help overcome one of the possible shortcomings of specimen data. His talk will be Cleaning and adding value to inaccurate geographical descriptions on specimen labels.

The uses to which readily available biodiversity information can be put in pure research also will be addressed. **Dr. Craig Moritz**, Director of the Museum of Vertebrate Zoology and Professor of Integrative Biology at the University of California at Berkeley, has been invited to speak on his research, which combines information from surveys of molecular variation with data on demography and current or historical distributions to infer population processes—the basic sources of biodiversity—in space and time. The title of his symposium speech is Biodiversity informatics and conservation of pattern and process.

Dr. Carsten Rahbek, of the Zoological Museum of Copenhagen University, will also demonstrate research uses for biodiversity data such as that which GBIF will provide. At the same time he will sound a cautionary note about the suitability of certain datasets for addressing particular problems. Dr. Rahbek's work is tightly linked with direct applications to conservation biology in Africa. For this symposium, his title will be Use

of large quantitative distribution databases in biogeography and conservation research.