



Global Canopy Programme, John Krebs Field Station, Wytham, Oxford, OX2 8QJ, United Kingdom.
Tel: +44 (0) 1865 724222, Fax: +44 (0) 1865 724555 e-mail: k.secoy@globalcanopy.org
Web site: www.globalcanopy.org

Dr Maurice Leponce,
Conservation Biology Section
Royal Belgian Institute of Natural Sciences
29 Rue Vautier
1000 Brussels
Belgium

18th October 2005

Dear Maurice,

Re: IBISCA – Towards a Census of Tropical Rainforest Life

There can be few greater challenges facing natural scientists than the loss of biodiversity and the impact this loss will have on the functioning of ecosystems that maintain the health of the planet. Occasionally we forget that pollution, overpopulation, even climate change are conditions that are either fixable or may come to equilibrium within perhaps centuries. The present scale of global biodiversity loss is however, on an evolutionary scale, which will not recover for millions of years.

Against this background we see forests, where the greater portion of earth's biodiversity exists and in particular tropical forest canopies, which harbour an estimated 40% of all terrestrial biodiversity, fragmenting faster than any other habitat. We also see the capacity of science to document this life declining to the extent that within a decade, experienced classical taxonomists may themselves become an endangered species. A new emerging threat will be the impact of climate change which may commit 60% of biodiversity "irrevocably towards extinction" within half a century. The intimate interface between forests and the atmosphere, coupled with the high biodiversity they contain also makes tropical forest canopies uniquely in the front line of habitats likely to experience the impact of predicted climate change. There are compelling arguments in favour of an immediate global effort to document the extent and nature of rainforest biodiversity within a 10-15 year time scale.

Whilst basic science arguments for studying the extent and role of biodiversity may also be strong, in addition to the more applied fields above, large scale funding for this kind of research has to date often been diverted into an argument around a simple question. What is the value of biodiversity? I would argue that a growing field of study over the next decade will be in the science and economics which can underpin the emergence and development of markets in ecosystem services as a means of adding value to

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forests and as a means of delivering poverty alleviation. Europe has taken a lead in the implementation of carbon trading markets and we are now seeing the first trades emerging in other ecosystem services. At inception good science must underpin the determination of value coupled with an understanding of function. In the case of tropical rainforest biodiversity we cannot even estimate the number of species closer to than between 5 million and perhaps 15 million, let alone the function of this variability. The kind of opportunity presented by IBISCA and the Census of Tropical Rainforest Life will be an essential step along the way to ultimately understanding the function and value of biodiversity. It is not the case that this opportunity will still exist a decade or more later because as explained above, both the resource base and the scientific capacity to study it, are declining rapidly.

Because of these arguments I most urgently and strongly support the case for funding the further development of the IBISCA model. The GCP has been a loyal and until now a modest supporter of the implementation of IBISCA. We expect and hope to continue our financial support in the future and this will offer co-financing for future projects. Without doubt IBISCA has gathered the world's best and most experienced arthropod taxonomists in a unique collaboration, which is delivering extraordinary results. To date the in-kind value of the expertise and time spent by its scientific team far exceeds the extent of funding they have received by I suspect a factor of 1:5. This represents extraordinarily good value. At the recent ESF funded IBISCA workshop in Brussels, the sheer scale of the undertaking became apparent, with perhaps half a million specimens being identified and catalogued in museums across the world but all within a carefully and statistically valid project design that, it is expected, will reveal much about what life exists and also where it exists, within the forest from leaf tip to root tip. This has never been attempted before, on this scale, anywhere. The first excellent publications are emerging and I expect major synthetic papers in Science of Nature to follow.

The result of these first steps is a protocol and a powerful new model for research, on the edge of being ready to roll out into other areas of the world, over the next decade. It is therefore essential that this initial work is first completed, secondly disseminated and thirdly the next steps are defined. ESF has taken a lead in enabling this largely European inspired academic effort to occur and I urge that it continues to do so. There is also an important global context to which this research will contribute. The Global Canopy Programme, based at Oxford, UK, has developed a global network of scientists, institutions and sites engaged in studying the forest, from canopy to soil, in temperate and tropical forests. It has developed protocols for research projects and is providing training in canopy access and science methods. Our courses are currently operating in Britain, Brazil and Malaysia and will be extended to India, China, Ghana and Madagascar in the coming years. The United Nations Environment Programme and five of the national governments above, have given their backing to a 5 year \$18 million project entitled: "*Whole Forest Observatories - an international network for monitoring canopy biodiversity and the impact of global climate change*", starting in 2007. (See: www.globalcanopy.org) The UN Global Environment Facility has committed approximately \$6million towards this effort, which will provide vastly increased capacity for forest canopy science in biodiversity hotspots across the tropics. It is likely that the IBISCA project and the GCP will find considerable synergy in their activities and can therefore offer mutual academic support and co-financing over the forthcoming years of our respective projects. Modest ESF support for IBISCA, at this critical stage in its development, is likely to be leveraged into considerably greater funding and therefore capacity for science, later on in collaboration with the Global Canopy Programme and other bodies worldwide.

Yours sincerely,



Andrew Mitchell
Director