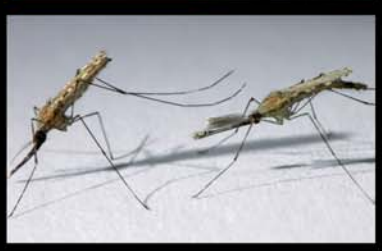






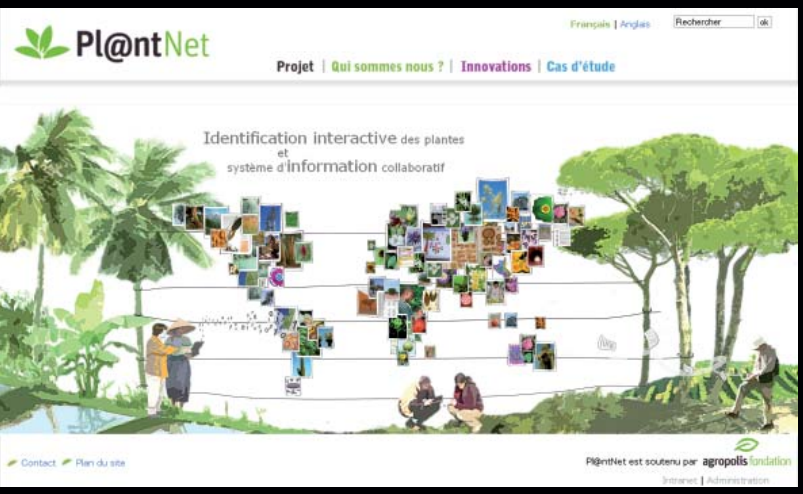

les dossiers
d'AGROPOLIS INTERNATIONAL

Expertise of the scientific community

Biodiversity
Science for humans and nature

Number 13

Pl@ntNet—a collaborative network and computer platform devoted to compilation and sharing of botany tools and knowledge



▲ *Home page of the Pl@ntNet website.*

Pl@ntNet is an initiative proposed by an international consortium pooling many organizations built around three core teams: AMAP, the IMEDIA project team of the French National Institute for Research in Computer Science and Control (INRIA) and Tela Botanica, the French language botany network. This 4-year project (supported by Agropolis Fondation), aims to create a computer platform designed to facilitate the acquisition, analysis and collaborative use of data on the plant community by three overall categories of stakeholders: scientists, managers and citizens.

Substantial datasets must be collected and existing data effectively used in order to meet the growing need for syntheses to address major global challenges concerning the plant community. Annotation, browsing and processing tools and software that Pl@ntNet plans to develop and disseminate will be able to deal with many types of data (herbaria, photos, geographical distributions, phenology, ecology, uses, etc.). These tools will be offered on an open source basis for use directly on the platform or off-line, and will enable users to individually manage their own botanical data, and to exchange them with other users—scientists, professional environment stakeholders or amateurs. The accumulated data could then be used for citizen science projects, e.g. for drawing up flora inventories, taxonomic indices or interactive training tools. The user-friendliness and efficiency of the developed software will be assessed by a panel of users through the Tela Botanica network and within the framework of pilot projects carried out with many international partners so as to match applications with needs and end-user expectations. Several research thesis projects on visual content-based indexing and mining and on ecological topics are planned, and the results will be directly inserted in the platform. All of this research will ensure significant progress in agronomy, ecology, bioinformatics, tropical and Mediterranean botany.

Pl@ntNet is part of a large global movement aimed at enhancing the management and effective use of taxonomic information as a complement to other global initiatives (Global Biodiversity Information Facility, European Distributed Institute of Taxonomy, Encyclopedia of Life, KeyToNature), while applying standards defined by the Taxonomic Database Working Group.

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For further information: **www.plantnet-project.org**

A field philosophy devoted to biodiversity

Biodiversity conservation is implemented in a setting of twofold uncertainty—factual uncertainty (What was the initial state of the environment? What are the likely impacts of a given measure?) and normative uncertainty (What biodiversity should we protect? Why should we protect it?). The experimental method is tailored to deal with factual uncertainty. It aims to overcome the uncertainty and, when this is impossible, to take it into account by setting up a procedure for monitoring the effects of a given measure so as to adjust it according to how the impacts fulfil the initial management objectives.

What about normative uncertainty? Different and sometimes even competing values are involved to warrant biodiversity conservation: interests of present or future humans, animal rights, respect for living organisms, intrinsic value of species or evolutionary processes, etc. Contrary to the traditional dichotomy between facts and values, the pragmatic approach contends that the boundary between what is and what should be is much more permeable than Western philosophers have acknowledged until now. Values are not abstract entities that just have to be discovered and rationally and comprehensibly organized, but instead they are practical tools that individuals and social groups use to deal with encountered problems.

These values could be just as relevant a focus for an experimental study as ecological phenomena. This is the rationale behind the idea of a field philosophy based on representations, declarations and actions of stakeholders involved in real problems. In this way, a normative framework can be developed 'from the base' to clarify tensions that inevitably arise with biodiversity conservation. These may be internal tensions (What biodiversity should be preserved?) or external tensions (What balance should be established between biodiversity conservation and other social requests?).

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