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# ABSTRACTS

# KEYNOTE LECTURES, COMMUNICATIONS, POSTERS

## II INTERNATIONAL PLANT SCIENCE CONFERENCE (IPSC)

### "NOT ONLY FOOD: SUSTAINABLE DEVELOPMENT, AGRO-BIODIVERSITY CONSERVATION & HUMAN WELL BEING"

5. = IMPLEMENTATION OF AN ONLINE INFORMATION SYSTEM FOR THE "FLORA CRITICA D'ITALIA"

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Since the early 2000s, within the Italian Botanical Society was discussed the opportunity to realize collaboratively a modern Flora articulated in monographs on the model of others under construction or recently completed in several European countries (1).

This initiative had a milestone in 2007 with the institution of the "Fondazione per la Flora Italiana", with the aim of supporting the activities of study, conservation and cultural and scientific enhancement of the flora of Italy and of sensitizing the national community about the many functions that it implements, in the context of natural and semi-natural ecosystems.

The "Foundation for the Italian flora" is responsible for the publication of the "Flora critica d'Italia". During the course of the project, it became apparent the diminishing impact of the hard copy in favour of an online information system more flexible and upgradeable and thus more suited to the current needs of the research but also in all fields of everyday life.

Last 25th February the first 3 contributions, concerning the families of *Isoetaceae*, *Heliotropiaceae* and *Hydrophyllaceae* (2, 3, 4) have been published online (http://www.floraditalia.it/index.php?page=flora_critica). These early contributions were prepared in the traditional way with a text editor.

In order to create the online information system, under the indications of the Editorial Committee, the Board of Directors decided to rely on the experience gained by the staff of Palermo in the field of biological databases (5, 6) and to support by itself the development of a specific software.

It is currently under construction and implementation a relational database that serves as a base for the entire project. It include information related to nomenclature, taxonomy, description, keys, distribution, images, karyology, uses, vernacular names, etc.

Data and tables are standardized according to TDWG (Taxonomic Database Working Group) standards (http://www.tdwg.org) and comply with the The Global Biodiversity Information Facility (GBIF) data architecture.

The system is composed by two main parts: a database and a web application. The database currently contains 16 relations (although more will be built within the end of the project) and relies onto MySQL Database Management System.

The web application is built using PHP scripting language and the CakePHP framework for the server-side part, running on a Linux server. The client-side part leverages onto Javascript and Jquery library. It follows the MVC[1] (Model View Controller) design paradigm. It deals with the database manipulation in terms of data management and data presentation along with user management. The whole system addresses several main security issues such as passwords hashing, accesses logging and code injection protections.

Data inputting is online by a web browser. The authors will input data in user friendly forms or to import tables.

Outputs produced include online ones coming from queries and pdf production to be done periodically to fix what done or to prepare chapters of the volumes to be eventually printed and included in a hard copy volume.

1) L. Pignotti (2006) Progetto per una Flora critica dell'Italia. SBI, Firenze.
2) A. Troìa, W. Greuter (2015) *Isoetaceae* 1.0. Fondazione per la Flora Italiana, Firenze.
3) L. Cecchi, F. Selvi (2015) *Heliotropiaceae* 1.0. Fondazione per la Flora Italiana, Firenze.
4) L. Cecchi, F. Selvi (2015) *Hydrophyllaceae* 1.0. Fondazione per la Flora Italiana, Firenze.
5) G. Domina, F.M. Raimondo, P. Mazzola (2003) Species Plantarum 250 years meet. Abstr.: 34b, Uppsala, 22-24 agosto 2003.
6) A. Scialabba, P. Marino, G. Bazan, G. Domina (2012) Bocconea 24, 327-334.

[1]http://en.wikipedia.org/wiki/Model%E2%80%93view%E2%80%93controller