

**Project LISY: data banks for the compilation of a national list
of syntaxonomic units of Italy**

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ABSTRACT. – Project LISY is the Italian national initiative concerning the constitution of two interconnected data banks related to all the available phytosociological knowledge of Italian vegetation: (i) bibliographical references of all papers about phytosociological studies in Italy, (ii) all the quotations of syntaxonomical information. This project is intended to be the first step towards the compilation of the prodrome of Italian vegetation.

KEY WORDS – bibliographical data bank; phytosociology, syntaxonomic data bank

INTRODUCTION

The problem of building and managing a complete data bank concerning vegetational information in Italy is still unsolved. Several attempts have been made since now and lead to the constitution of archives related to subsets of vegetational data chosen on a limited syntaxonomical or territorial base (Pignatti 1992). In particular the realization of a data bank covering the whole Italian territory with all the information extracted from the available literature has never been carried out since informatic facilities became easily available.

In this context the project LISY was planned to be the national initiative concerning a complete list of syntaxa quoted for Italy in all existing phytosociological literature. The acronym LISY means “list of syntaxonomical units”.

This project has been promoted by Società Italiana di Fitosociologia (Italian Association for Phytosociology) and it originated in the spring of 1993, during a workshop on Italian vegetation in Ancona. The first actual plan of the project was defined during an informal meeting among E. Biondi, F. Bracco, E. Feoli and P. Nola in the coffee bar within Agricultural and Environmental Biotechnology Department of Ancona University.

The aim of the project is to create a data bank covering all the current knowledge about Italian vegetation and to make available all necessary information to allow the compilation of a national prodrome. Because of the

lack of a sound bibliographical basis, the project had to include two different interconnected data sets:

- 1) an up-to-date bibliographical list of all papers with quotations of syntaxonomical units;
- 2) a list of syntaxonomical units, in which every syntaxa has some further information concerning hierarchical relations in syntaxonomy, geographical distribution, type of data supporting the quotation and so on.

The collection and recording of all these data requested a big amount of work and there was no single working group able to support it. That's why it was decided to organize one working group in each administrative region of Italy, which was responsible for the compilation of the data bank concerning its own region. The members of the regional working groups are: (Abruzzo) G. Abbate, N. Tartaglioni; (Basilicata) M. Tomaselli; Calabria: G. Spampinato; (Campania) V. La Valva, S. Mazzoleni, M. Ricciardi; (Emilia Romagna) F. Piccoli, G. Puppi; (Friuli Venezia Giulia) L. Poldini, M. Vidali; (Lazio) C. Blasi, C. Fabozzi, P. Fortini, A. Scoppola; (Liguria) S. Gentile, I. Vagge; (Lombardia) S. Assini, F. Sartori; (Marche) S. Ballelli, E. Biondi, E. Formica, F. Pedrotti, F. Taffetani; (Molise) F. Lucchese; (Piemonte e Valle d'Aosta) F. Montacchini, C. Siniscalco; (Puglia) S. Marchiori; (Sardegna) M.C. Fogu, L. Mossa; (Sicilia) E. Cirino, N. Longhitano; (Toscana) V. De Dominicis; (Trentino Alto Adige) F. Pedrotti; (Umbria) S. Ballelli, E. Orsomando; (Veneto) F. Bracco, G. Buffa, G. Caniglia, L. Ghirelli, M. Serdoz.

A central commission was created by Italian Association for Phytosociology in order to co-ordinate all the operations and to assess the common standard criteria for data selection, codification and recording.

The first plan of the project was then examined and criticized by the Commission and so the project became operative in June 1993, when a computer program for data entry and a manual with all the general criteria, the specific instructions and codes were sent to each regional working group.

In order to succeed in our aim we planned different work phases:

- 1) the accomplishment of regional data banks, that's to say both bibliographical and syntaxonomical data banks;
- 2) the merging of the regional bibliographical data banks into one consistent list to allow the compilation of a national phytosociological bibliography;
- 3) the merging of the regional syntaxonomical data banks into one national database, interconnected with the national bibliographical list;
- 4) the compilation of the national list of all quoted syntaxonomical units; for each one bibliographical references, geographical locations and type of available data are reported.

The result of this project is a completely objective list, that's to say all the quotations of syntaxonomical units appear in the list just like photocopies of

what was in the original papers, without any correction or modification. This criterion was adopted to allow the parallel work of the many regional groups without introducing any bias and so to determine a clear distinction between the step of data collection and the step of a critical syntaxonomical revision.

CONTENTS OF DATA BANKS

The record in the bibliographical data bank consists of the following fields:

- [1] Code number
- [2] Authors
- [3] Date of publication
- [4] Title
- [5] Complete quotation of the review or of the book
- [6] A codification of the kind of study (for example syntaxonomical research, vegetation mapping, ecological study and so on)
- [7] Codes of administrative regions included in the paper
- [8] Codes of geographical regions included in the paper
- [9] An over-simplified codification of vegetation types

The record in the syntaxonomical data bank consists of several fields grouped in 4 different sections:

Section 1: Quoted syntaxon

- [1] Syntaxon name
- [2] Syntaxon author
- [3] Synonym (if explicitly reported in the paper)
- [4] Synonym author
- [5] Field to specify if the author reports for the quoted syntaxon further specifications which are null from a syntaxonomical point of view
- [6] Syntaxonomical category code (subassociation, association, suballiance, alliance, suborder, order, subclass, class)
- [7] Field to specify the case that the quoted syntaxon represents the description of a new syntaxon
- [8] Code for the type of data supporting the quotation (single releve, table, synoptic table and so on)

Section 2: Syntaxonomical position of the recorded syntaxon when specified by the author of the paper

- [9] Class name
- [10] Class author
- [11] Order name

- [12] Order author
- [13] Alliance name
- [14] Alliance author
- [15] Association name
- [16] Association author
- [17] Field to point out the existence in the paper of reported synonyms of syntaxa quoted in this section

Section 3: Bibliography

- [18] Code number referred to the LISY bibliographical list available to the regional working groups
- If the paper was not included in this list:
- [19] Date of publication
 - [20] Authors
 - [21] Complete quotation of review or book

Section 4: Geographical location of the quoted taxon when reported by the author of the paper

- [22] Codes of the geographical regions
- [23] Codes of the administrative regions
- [24] Codes of the administrative district
- [25] Names of administrative communes
- [26] Place-name
- [27] Minimum of altitude
- [28] Maximum of altitude

[29-32] 4 fields available for discretionary notes of the compiler. They have also been used as an extension of section 2 (syntaxonomical position of quoted syntaxa) to record suballiance and/or suborder and/or subclass if the author reports them in the paper.

PRESENT SITUATION

In 1995 all the contributions of regional working groups arrived at Botanical Institute of Pavia University, the operating centre of the project LISY. Then the long work of merging the data banks began.

In relation to the bibliographical data bank, a draft of national bibliographical list has been prepared and submitted to the regional working groups in order to check for errors and missing data. Now on the basis of the corrections we are preparing the definitive national bibliography, containing paper quotations up to the end of 1993. This list consists of 2079 records (Fig. 1; Tab. 1).

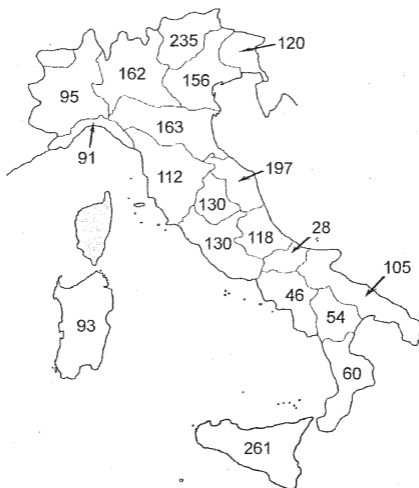


Fig. 1 – Geographical distribution of bibliographical records.

As far as syntaxonomical data bank is concerned it is necessary to point out that the process of merging the regional data banks now is concluded but the existing records need to be fully checked for improper quotations or unobvious duplicates.

This list consists of 16394 records (Fig. 2; Tab. 1).

PERSPECTIVES

On the basis of the present state of the work we foresee that phase 4, the compilation of the national list of all quoted syntaxonomical units, will be

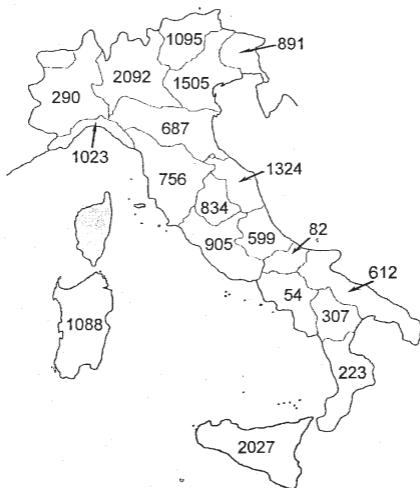


Fig. 2 - Geographical distribution of syntaxonomical records.

concluded at the end of 1995. So in 1996 it will be possible to begin the syntaxonomical revisions of the Italian vegetation in order to prepare a national prodrome.

This second step, which consists of a critical approach and analysis, has not been yet fully planned and the organization of this second project will be a main subject of discussion in the next future within the Italian Association for Phytosociology.

Apart from their usefulness in building the Italian prodrome, the two data banks will be available for both scientific and applied uses. In fact the importance of these data banks is particularly relevant in Italy. As far as the scientific approach is concerned it is important to point out that libraries with

TABLE I

NUMBER OF BIBLIOGRAPHICAL AND SYNTAXONOMICAL RECORDS FOR EACH ADMINISTRATIVE REGION

Administrative Regions	Bibliographical records (num)	Syntaxonomical records (num)
Abruzzo	118	599
Basilicata	54	307
Calabria	60	223
Campania	46	54
Emilia Romagna	163	687
Friuli Venezia Giulia	120	891
Lazio	130	905
Liguria	91	1023
Lombardia	162	2092
Marche	197	1324
Molise	28	82
Piemonte & Valle d'Aosta	95	290
Puglia	105	612
Sardegna	93	1088
Sicilia	261	2027
Toscana	112	756
Trentino Alto Adige	235	1095
Umbria	130	834
Veneto	156	1505

rich phytosociological sections are not present in all administrative regions and availability of an up-to-date bibliography will facilitate the access of all the researchers to literature information. In regard to the applied uses, this set of information would be able to represent a useful tool for operators in local and central administrations working in environmental field.

After the accomplishment of the present project LISY we underline the need to carry on the collection and the recording of further information from papers to come. It follows that the Italian Association for Phytosociology will be encouraged to plan a continuous and regular prosecution of the work carried out till now.

REFERENCES

- PIGNATTI S., 1992 - *European vegetation survey - structures available in Italy*. Ann. Bot. (Roma), **50**: 119-123.