INFORMATION ON DEVELOPING DATABASES CONTAINING FORAMINIFERS OF ROMANIA

Muşat GHEORGHIAN, Leonida ERHAN, Daniel ERHAN, Radu ERHAN

Abstract: The present study is to inform about the large database entitled “Foraminifers Fossils of Romania”. It is addressed to the geologists and technicians in mining and drilling. It allows fast access to that large bibliographical material by use of a PC. The bibliographical material was processed so as to permit the input into computer databases. In the following step we assembled the information in such a way as to obtain quickly up-to-date complex information on the desired elements. First were made the programs to fill the primary databases with information. At this time we already have five databases and we are working on the sixth. These databases are: “Main”, “Place”, “Place”, “Place”, “Genus”, “The Atlas”.

Key words: foraminifers, database

Numerous books and papers on Foraminifers of our country have been published in the last 150 years, including notes, studies or even monographic works. Those which dealt with the description of some genus or species, signalling the presence of some associations or resolving some problems of regional stratigraphy stress the importance of Foraminifers in aging sedimentary formations of marine origin.

This work had been reached the existence of an impressive number of titles (over 1400) which form the basic documentary treasure on the knowledge about the presence and distribution of Foraminifers in Romania.

The present study has been worked out with the intention to provide information on the large database entitled “Foraminifer Fossils of Romania”. It addresses not only specialists but also geologists and even technicians in mining and drilling.

For having fast access to that large bibliographical material we have chosen the support offered by the present-day information technology, using a PC.

The bibliographical material has been processed so as to permit the input into computer databases.

In the next step we assembled the information so as to obtain quickly complex up-to-date information on the desired elements.

For attaining that purpose, first the programs used to fill the primary databases with information were made. At the date of writing this article we already have five databases and we are working on the sixth. The five databases are:

First database: “Main” (over 1400 titles) contains bibliographical cards for the processed data, as follows:
- the numerical code, author(s) of the book or article, title, journal which holds it (or publishing house for the books), the language in which it was originally written, place of issue, the library where it can be found.

Second database: “Place” (over 1840 names) contains information regarding the place of origin, district and numerical code of the place.

Third database: “Age” (almost 1300 records) contains, for each record, the numerical code, name and its geological formation.

Fourth database: “Place” (over 8000 names) to which correspond individually:
- numerical code of the species, name of the species, name of the author (the person who discovered it), numerical code of the subspecies, name of the subspecies, name of the author for subspecies, likely synonyms, year for original description, place of origin, place of origin for the holotype.

Fifth database: “Genus” (895 names) contains information regarding the numerical code of the name, the author, the year of description of generic type and the likely synonymy.

Sixth database: “The Atlas” contains pictures taken by scanning for all the foraminifers species found in Romania.

In the next step we assembled the data from the primary databases, operation which required two new programs:

Program 1: “Integrated files” contains coded elements regarding:
- code of the genus, name, author;
- code of the species, name, author;
- code of the subspecies, name, author;
- for each name its state (valid, erroneous, amended, synonym) is recorded;
- code of the book or article in which was first recorded the species;
- page number, drawing, picture, table, for finding easy the original information in the bibliography;
- code of the age of geological formation;
- code of the place of origin.

Program 2: The program “General file” shows in a special format all the information described above. At the present time this program contains five subprograms, that is five possibilities of sorting the information and they are:

A. By species, with two choices:
- exact code and name
- synonymous code and name

B. By generic name - After searching by generic name it displays in extenso all the records which contain the species
for the selected genus sorted in their alphabetical order.

C. By geological age of the Foraminifer formations.

D. By place of origin (for Romania).

E. By alphabetical order of the authors of the researched bibliography.

At this time we are in the phase of acquiring and processing the images for filling in the “Atlas” database - Agglutinated foraminifers.

The aging of the analyzed probe which contains Foraminifers through classical methods can last hours or even days, but by using a computer along with this database the necessary time is reduced to minutes. For quickly establishing the genus and species we will follow the next steps: we will examine successively the basic morphological elements, the secondary morphological elements and, at last, the detailed ones. So we can identify step by step, but quickly, the gender and species of the Foraminifers to which the sample belongs. Each figure is attached to a text containing the name of the species to which it belongs. After establishing to which genus or species the sample belongs, the “general file” database will be used which will display the complete information on it.

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The program, in the final form, will contain over 600,000 complex information on almost 10,000 species and subspecies which have been gathered from the existing specific documentation for about 38 years. It is divided into three parts:

- Part I - Agglutinated Foraminifers
- Part II - Limestone Foraminifers with Porcelaneous tests
- Part III - Limestone Foraminifers with hyaline tests.

The current stage is:
- The input of data is completed for Part 1 and it continues for Part 2;
- Acquiring and processing images is soon going to be fulfilled for Part 1;
- The program for linking the images to records is at work.