THE HERBARIUM GENERALE MINORICAE

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INTRODUCTION

Following the steps given in the nineteenth century by the eminent botanist and naturalist J.J. Rodríguez Femenías with its historic Herbarium, the Herbarium Generale Minoricae (from now on: HGM) was initiated in 1999 with the primary intention of fostering the study and knowledge of the rich flora of the island of Menorca. With the support of such a strong documentary base as the recently updated Catalogue of the Vascular Flora of Menorca (from now on: CFVM) (Fig. 1) and the work of various scientists and botanists, the central collection of HGM has been growing steadily. The birth of the Commission of Botany in the same year, 1999, has had a lot to do with this situation. This Commission, composed by scientists from the Institut Menorquí d'Estudis (IME) and Grup Balear d'Ornitologia i Defensa de la Naturalesa (GOB) in Menorca, supported the creation of these two great research, knowledge and sensitization aforementioned tools: the HGM and CFVM.

Figure 1. Catalogue of the Vascular Flora of Menorca

OBJECTIVES

- To get the presence in HGM's collection of an adequate number of records and testimonies of those taxa that are part of the vascular flora of Menorca.
- To reach an adequate management of HGM as a basic tool for further study and knowledge of the flora of Menorca, as well as for public awareness with conservational and educational purposes.
- To house HGM's main collection of vascular plants in the database of the GBIF network, thus achieving a high and adequate dissemination and international relevance. The first of the necessary steps to carry out this purpose has already been given with the migration of HGM'S records from HERBAR 3.4 version to 3.7 version, much closer to international standards required by GBIF (Darwin Core standard).

ORGANIZATION and METHODS

The HGM is housed at the headquarters of IME. The treatment, handling and mounting process of the sheets follows essentially the criteria and recommendations of Bridson and Forman (1998). With the aim of facilitating the management and handling works, as well as the query, export and update of the records, the central collection of HGM is fully computerized using the latest version (3.7) of HERBAR (Fig. 2), an application software designed by Francisco Pando in the Royal Botanical Garden of Madrid which has been adopted as standard by the AHIM (Asociación de Herbarios Ibero-Macaronésicos) and is recommended and supported by the Spanish Node of GBIF (Global Biodiversity Information Facility). Through this application are obtained the labels that are subsequently included in the different sheets that contain the specimens recorded (Fig. 3). Once the labeling process is completed, the sheets are definitively stored in boxes previously arranged alphabetically by families and genera (Fig. 4).

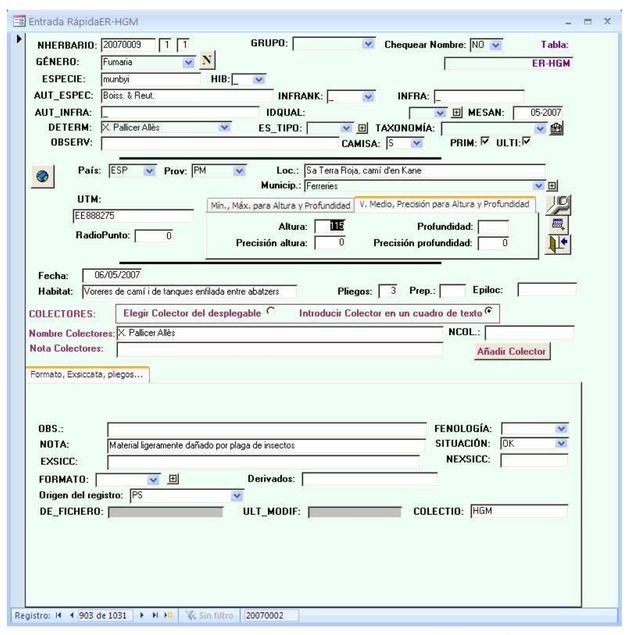


Figure 2. Example of quick entry record in HERBAR 3.7

Figure 3. Example of completed sheet

Figure 4. Location and organization detail

CURRENT SITUATION

The main collection of the Herbarium Generale Minoricae currently houses 1.031 records that include 577 different taxa distributed in 309 genera and 83 families of vascular plants, mostly natives of Menorca. In fact, only one of the records in the collection corresponds to a specimen outside the island (an *Aster tripolium* ssp. *pannonicus* from the Alt Empordà in Girona). To contextualize the numbers of the collection, it is necessary to turn to a quantitative analysis of data from the main documentary base of the island in regard to vascular flora: the Catalogue of the Vascular Flora of Menorca updated in 2009. Through this analysis are obtained the following results: there are 1348 taxa belonging to the vascular flora of Menorca distributed in a total of 542 genera and 134 families. So, it is clear that there is still some work to do to accomplish one of the main initial objectives of the HGM: to get the presence in HGM's collection of an adequate number of records and testimonies of those taxa that are part of the vascular flora of the island of Menorca.

RESULTS (Tables and Graphics)

A more specific series of tables and graphics are shown below to offer an image closer to current reality of HGM's main collection database. The data presented are referred to the most representative genera (Table 1) and families in the database (Table 2 and Fig. 5), the main collectors of HGM (Fig. 6), as well as the most widely used collection periods (in months) (Fig 7) and collection efforts made throughout time (in years) (Fig. 8). All tables and graphics show the results based on the number of herbarium records.

GENUS	HERBARIUM RECORDS
Vicia	31
Trifolium	30
Euphorbia	23
Medicago	22
Juncus	17
Centaurium	14
Linum	13
Kickxia	12
Limonium	12
Lotus	12
Ononis	12
Bellis	11
Bromus	11
Carex	11
Lathyrus	11
Mentha	11
Teucrium	11
Vulpia	11
Fumaria	10
Plantago	10
Silene	10
Others (288)	726

FAMILY	HERBARIUM RECORDS
Leguminosae	153
Compositae	128
Gramineae	123
Labiatae	61
Cruciferae	41
Euphorbiaceae	32
Scrophulariaceae	30
Caryophyllaceae	29
Cyperaceae	28
Chenopodiaceae	22
Umbelliferae	21
Gentianaceae	20
Papaveraceae	19
Juncaceae	17
Boraginaceae	16
Liliaceae	16
Linaceae	15
Rubiaceae	15
Others (64)	245

Tables 1 and 2. Most representative genera and families in number of herbarium records

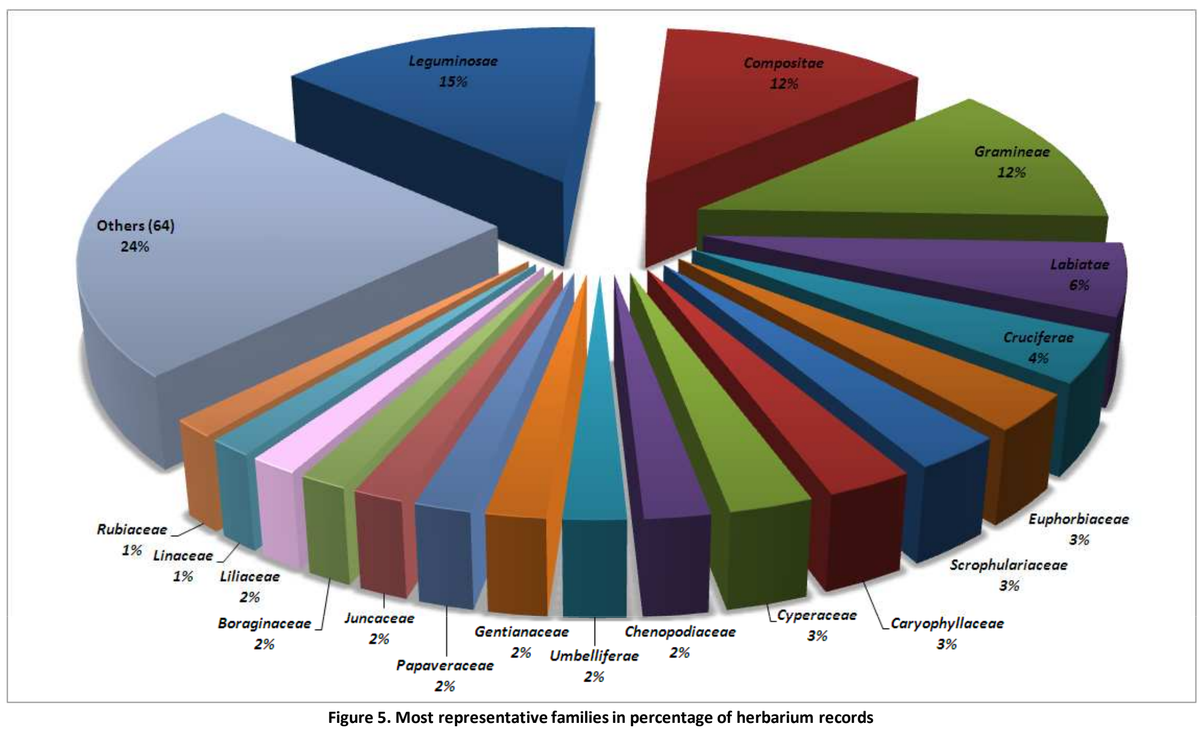
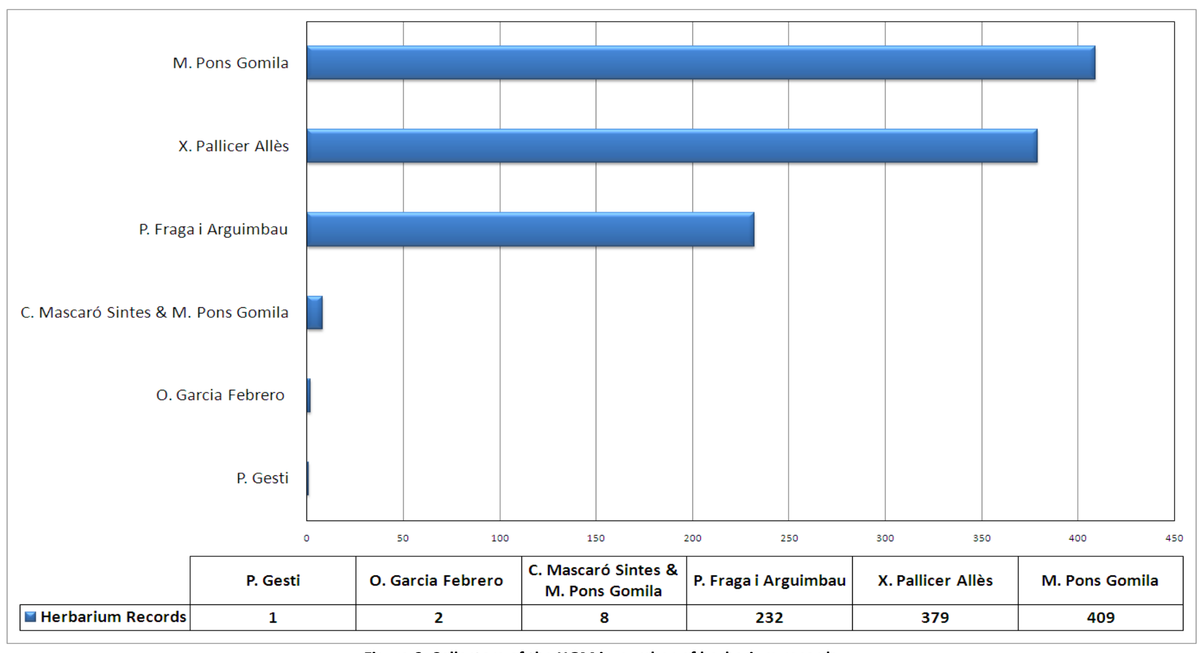


Figure 5. Most representative families in percentage of herbarium records



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Herbarium Records	1	2	8	232	379	409

Figure 6. Collectors of the HGM in number of herbarium records

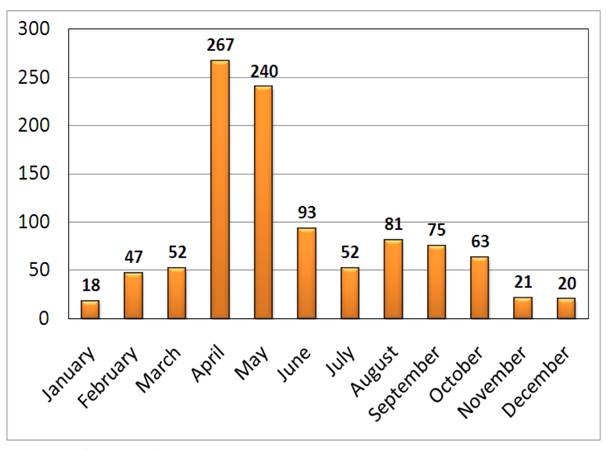

Figure 7. Number of herbarium records per collection month

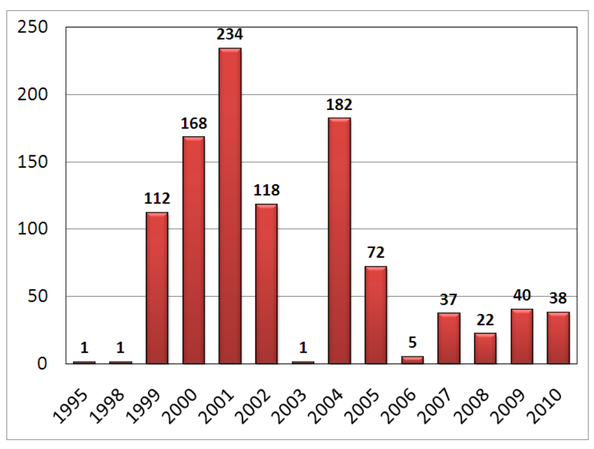

Figure 8. Number of herbarium records per collection year

CONCLUSIONS

The Herbarium Generale Minoricae is still a young herbarium which has a long way to reach and fully satisfy the objectives proposed at the beginning. However, the current collection and existing database are getting some importance as a prominent platform of the rich vascular flora of Menorca. In fact, in a not so distant future, the HGM will almost certainly become an absolutely indispensable reference tool for botany, science, conservation and education in Menorca and the Balearic Islands.

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