

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/312164950>

The conservation of the endemic Crop Wild Relatives in the RIBES seed-banks: towards a national priority list for...

Conference Paper · November 2016

CITATIONS

0

READS

49

22 authors, including:



Sara Magrini

Tuscia University

73 PUBLICATIONS 200 CITATIONS

[SEE PROFILE](#)



Gianluigi Bacchetta

Università degli studi di Cagliari

353 PUBLICATIONS 2,452 CITATIONS

[SEE PROFILE](#)



Angelino Carta

Università di Pisa

71 PUBLICATIONS 271 CITATIONS

[SEE PROFILE](#)



Fabio Taffetani

Università Politecnica delle Marche

77 PUBLICATIONS 348 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



The Italian gypsophilous vascular flora [View project](#)



Taxonomic revision of infrageneric groups of Viola (Violaceae) [View project](#)



HORTUS
BOTANICUS
KARALITANUS



RIBES

una rete per la

biodiversità:

10 anni di conservazione

Atti del convegno

Cagliari, 16 novembre 2016

convegno
RIBES
conservazione
biodiversità
rete
10 anni
seed-bank
germoplasma

Atti del convegno

RIBES

una rete per la

biodiversità:

10 anni di conservazione

Cagliari, 16 novembre 2016

A cura di:

Mauro Mariotti & Sara Magrini

The conservation of the endemic Crop Wild Relatives in the RIBES seed-banks: towards a national priority list for the Italian CWRs

Sara Magrini¹, Paolo Atzeri², Gianluigi Bacchetta², Gianni Bedini³,
Valentina Carasso⁴, Angelino Carta³, Roberta Ceriani⁵, Simona Ciancaleoni⁶,
Luciano Di Martino⁷, Marco Di Santo⁷, Giuseppe Fabrini⁸, Luigi Forte⁹, Loretta
Gratani⁸, Valeria Negri⁶, Marco Porceddu², Cristina Salmeri¹⁰, Roberto Sarigu²,
Anna Scialabba¹⁰, Fabio Taffetani¹², Mariacristina Villani¹³, Elena Zappa¹⁴ &
Mauro Mariotti¹⁴

¹Banca del Germoplasma della Tuscia, Viterbo, Italy; ²Banca del Germoplasma della Sardegna, Cagliari, Italy; ³Banca del Germoplasma di Pisa, Italy; ⁴Banca del germoplasma del Piemonte, Chiusa Pesio (CN), Italy; ⁵Banca del Germoplasma delle Piante Lombarde, Italy; ⁶Banca del Germoplasma di Perugia, Italy; ⁷Majella Seed Bank - Parco Nazionale della Majella, Italy; ⁸Banca del Germoplasma di Roma, Italy; ⁹Banca del Germoplasma del Museo Orto Botanico dell'Università di Bari, Italy; ¹⁰Banca del Germoplasma di Palermo, Italy; ¹¹Banca del Germoplasma di Catania, Italy; ¹²Orto Botanico "Selva di Gallignano", Ancona, Italy; ¹³Centro di Ateneo Orto Botanico dell'Università di Padova, Italy; ¹⁴Laboratorio per la conservazione della diversità vegetale ligure, Genova, Italy
E-mail: reteribes@gmail.com

Data of 620 crop wild relatives of species of food and fodder interest listed in the Annex I of the FAO Treaty (FAO, 2001) were collected within the census carried out by ISPRA, the *Italian National Institute for Environmental Protection and Research*, in 2014-2015 in order to quantify the extent of CWR representation in the Italian *ex situ* collections.

According to such census, the RIBES network preserve 37% of the Italian CWRs listed in the FAO Treaty: in 14 out of 16 seed-banks are preserved 6,029 accessions of 229 CWR taxa, belonging to 11 families and 57 genera.

Particularly, in the reference list, 28 endemic taxa occur, 20 of them exclusive of one Italian region and 12 are exclusive of Sicily (Peruzzi et al., 2014). Three of these are threatened with extinction (Rossi et al., 2013): *Brassica macrocarpa* Guss. [CR], a Sicilian endemic, *Brassica glabrescens* Poldini [VU], endemic of Friuli Venezia Giulia, and *Vicia giacominiiana* Segelb. [CR], endemic of Apulia and Calabria.

The assessment of the occurrence of endemic CWRs in the Italian seed-banks has shown a total of 294 seed accessions of 14 out of 28 taxa conserved *ex situ* in five seed-banks, Catania, Cagliari, Perugia, Padova and, especially, Palermo with 257 accessions of nine taxa. On the other hand, no accessions are preserved

in the RIBES seed-banks for the other 14 taxa, among them also a threatened species, *Vicia giacominiiana*.

- *Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl subsp. *nebrodense* (Brullo, Miniss. & Spamp.) Giardina & Raimondo
- *Brassica baldensis* (Prosser & Bertolli) Prosser & Bertolli
- *Daucus broteri* Ten.
- *Daucus carota* L. subsp. *rupestris* (Guss.) Heywood
- *Daucus nebrodensis* Strobl
- *Festuca centroapenninica* (Markgr.-Dann.) Foggi, F. Conti & Pignatti
- *Lathyrus apenninus* F. Conti
- *Lathyrus odoratus* L.
- *Malus crescimannoi* Raimondo
- *Phalaroides arundinacea* (L.) Rauschert subsp. *rotgesii* (Foucaud & E. Mandon ex Husn.) Valdés & H. Scholz
- *Vicia cosentina* Spreng.
- *Vicia giacominiiana* Segelb.
- *Vicia ochroleuca* Ten. subsp. *ochroleuca*
- *Vicia serinica* R. Uechtr. & Huter

Even if limited to the endemics listed in the Annex 1 of the FAO Treaty, this group of taxa can represent the starting point of the drawn up of a national priority list for the Italian CWRs. However, there is an urgent need to:

- define a shared list of CWRs, which allows us to preserve the Italian CWR diversity;
- individuate in such list the endemic and threatened taxa;
- assess their conservation in seed-banks in order to prepare national inventories;
- define a national priority list to ensure an effective CWR conservation and to optimize collection efforts.

FAO, 2001. International Treaty on Plant Genetic Resources for Food and Agriculture. Food and Agriculture Organization of the United Nations, Rome, Italy.

Peruzzi L., Conti F. & Bartolucci F., 2014. An inventory of vascular plants endemic to Italy. *Phytotaxa* 168(1): 1–75.

Rossi G., Montagnani C., Gargano D., Peruzzi L., Abeli T., Ravera S., Cogoni A., Fenu G., Magrini S., Gennai M., Foggi B., Wagensommer R.P., Venturella G., Blasi C., Raimondo F.M. & Orsenigo S. (Eds.), 2013. Lista Rossa della Flora Italiana. 1. Policy Species e altre specie minacciate. Comitato Italiano IUCN e Ministero dell'Ambiente e della Tutela del Territorio e del Mare.