

Mediterranean plant germination reports – 4

edited by Sara Magrini & Cristina Salmeri

Abstract

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This is the fourth issue of the series of germination reports from Mediterranean areas (sensu Med-Checklist). It comprises germination protocols for 17 taxa: *Centaurea* from central Italy by V. Di Cecco & L. Di Martino (No. 86); *Limonium* from Sardinia by M. E. Boi & al. (No. 87); *Glaucium*, *Helichrysum*, and *Plantago* from Central Italy by S. Magrini & al. (Nos. 88-90); *Anthemis* from Sicily by C. Blandino & al. (Nos. 91-97); *Silene* from Sicily and Calabria by C. Brullo & C. Salmeri (Nos. 98-102); lastly, *Armeria* from North Italy by Vuerich & al. (2022).

Editorial

This fourth issue of the series of germination reports from Mediterranean areas (sensu Med-Checklist) comprises six contributions reporting germination protocols for 18 taxa from Italy, Sardinia, and Sicily.

Six contributions are focused on 11 endemic species.

Di Cecco & Di Martino (2022, No. 86) reported germination data for *Centaurea tenoreana* Willk. (*Asteraceae*), endemic to Abruzzo (central Italy), and Boi & al. (2022, No. 87) for *Limonium merxmuelleri* Erben subsp. *merxmuelleri* (*Plumbaginaceae*), a Sardinian endemic.

Magrini & al. (2022, Nos. 88-90) reported germination protocols for three species from coastal dunes of central Italy: *Glaucium flavum* Crantz (*Papaveraceae*) and *Helichrysum stoechas* (L.) Moench (*Asteraceae*) from Tuscany, and *Plantago coronopus* L. (*Plantaginaceae*) from Latium.

In Blandino & al. (2022, Nos. 91-97), germination protocols for seven *Anthemis* (*Asteraceae*) taxa from Sicily are reported: among them, the dune species, *A. maritima* L. subsp. *maritima*, and six endemic species, *A. aeolica* Lojac., *A. aetnensis* Spreng., *A. cretica* L. subsp. *messanensis* (Brullo) Giardina & Raimondo, *A. cupaniana* Tod. ex Nyman., *A. parlatoeana* Raimondo, Bajona, Spadaro & Di Gristina, and *A. pignattiorum* Guarino, Raimondo & Domina.

Brullo & Salmeri (2022, Nos. 98-102) provided germination protocols for five *Silene* (*Caryophyllaceae*) species from Sicily and Calabria, including the first germination reports for the two endemic species, *S. calabra* Brullo, Scelsi & Spamp. from SW Calabria and *S. crassiuscola* Brullo, C.Brullo, Cambria, Bacch., Giusso & Ilardi. from NW Sicily, together with *S. colorata* Poir., *S. fruticosa* L., and *S. nicaeensis* All. from the Sicilian territories.

Lastly, Vuerich & al. (2022) reported the first germination data for *Armeria helodes* F.Martini & Poldini (*Plumbaginaceae*), endemic to Italy.

Available seed germination data for Mediterranean plants

During the first four years, over 60 authors from Italy, Malta, and Greece sent their contributions for publication in the “*Mediterranean plant germination reports*” column, for a total of 29 contributions mainly referred to species/populations from Sicily (51 reports) and peninsular Italy (41), besides seven reports from Greece and Malta.

Today, 102 reports of germination protocols have been published over four issues, for a total of 95 species, mainly belonging to the family *Asteraceae* (37), especially to the genera *Helichrysum* (11) and *Anthemis* (7), but also *Caryophyllaceae* (10), *Brassicaceae*, *Euphorbiaceae*, and *Fabaceae* (5). Among them, reports for 44 endemics have been published, especially for the family *Asteraceae* (25).

Moreover, germination protocols for 10 species which are threatened with extinction in Italy (Orsenigo & al. 2018; Rossi & al. 2013, 2020) have been published: four Critically Endangered species, *Abies nebrodensis* (Lojac.) Mattei (*Pinaceae*), *Euphorbia gasparrinii* Boiss. subsp. *gasparrinii* (*Euphorbiaceae*), *Anthemis aeolica* and *A. cretica* subsp. *messanensis* (*Asteraceae*), six Endangered ones, *A. pignattiorum* (*Asteraceae*), *Armeria helodes* (*Plumbaginaceae*), *Astragalus aquilanus* Anzal. (*Fabaceae*), *Muscari gussonei* (Parl.) Nyman (*Asparagaceae*), *Spiranthes aestivalis* (Poir.) Rich. (*Orchidaceae*), and *Viola kitaibeliana* Schult. (*Violaceae*), besides other 10 species which are Near Threatened.

This column can be a useful tool for researchers, conservationists, botanists, and other specialists, providing species-specific information on the pre-treatments and key factors to improve seed germination of native plants. Moreover, these germination data will early flow into an online, open-access database managed by the RIBES association to make them available to a wider audience.

For manuscript editing and submission, please follow the general instructions for the authors of *Flora Mediterranea* (<http://www.herbmedit.org/guide.html>) and the specific instructions for the *Mediterranean plant germination reports* (Magrini & Salmeri 2019; https://www.herbmedit.org/flora/FL29_269-271.pdf). Authors are invited to submit by e-mail their manuscripts in English to one of the editors.

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Addresses of the editors:

Dr. Sara Magrini*, Department of Ecological and Biological Sciences & Tuscia Germplasm Bank, Tuscia University, I-01100 Viterbo, Italy. E-mail: magrini@unitus.it

Prof. Cristina Salmeri*, Department of Biological, Chemical and Pharmaceutical Sciences and Technologies (STEBICEF), University of Palermo, I-90123 Palermo, Italy. E-mail: cristinamaria.salmeri@unipa.it

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