

Mediterranean plant germination reports – 3

edited by Sara Magrini & Cristina Salmeri

Abstract

Magrini, S. & Salmeri, C. (eds): Mediterranean plant germination reports – 3. — Fl. Medit. 31: 261-333. 2021. — ISSN: 1120-4052 printed, 2240-4538 online.

This is the third issue of the series of germination reports from Mediterranean areas (sensu Med-Checklist). It comprises germination protocols for 40 taxa: *Teucrium* from Sardinia by M. Porceddu & al. (Nos. 46-47); *Campanula* from North Italy by S. Villa & al. (No. 48); *Anacamptis* from Greece by S. Oikonomidis & C. A. Thanos. (No. 49); *Astragalus*, *Iris*, *Jacobaea*, and *Klasea* from central Italy by V. Di Cecco & al. (No. 50-53); *Drimia*, *Periploca*, *Asparagus*, *Myrtus*, and *Pancreatium* from Malta by J. Buhagiar & al. (Nos. 54-58); *Thymus* from Sicily by G. Gugliuzza & al. (No. 59); *Agrostemma*, *Bupleurum*, and *Xeranthemum* from North Italy by A. Cucchiatti & al. (Nos. 60-62); *Salsola* from Sicily and Central Italy by S. Magrini & al. (Nos. 63-65); *Physoplexis*, *Primula*, and *Spiranthes* from North Italy by S. Pierce & al. (Nos. 66-69); *Euphorbia* from Sicily by F. Carruggio & al. (Nos. 70-74); *Helichrysum* from Sicily by C. Salmeri & C. Brullo (Nos. 75-85).

Editorial

This third issue of the series of germination reports from Mediterranean areas (sensu Med-Checklist) comprises eleven contributions reporting germination protocols for 40 taxa from Greece, Italy, Malta, Sardinia, and Sicily, among them twenty endemics.

In the first report, Porceddu & al. (2021, Nos. 46-47) reported germination data for two species of the genus *Teucrium* from Sardinia, *T. massiliense* L. and *T. flavum* subsp. *glau-cum* (Jord. & Fourr.) Ronniger (*Lamiaceae*).

Two contributions are focused on eight species listed in Annexes II and IV of the EU Habitats Directive. In particular, Pierce & al. (2021, Nos. 66-69) reported germination protocols for four species from Lombardy, North Italy: *Physoplexis comosa* (L.) Schur (*Campanulaceae*), *Primula glaucescens* Moretti and *P. spectabilis* Tratt. (*Primulaceae*), and *Spiranthes aestivalis* (Poir.) Rich. (*Orchidaceae*). Di Cecco & al. (2021, Nos. 50-53) reported germination protocols of four policy species from Abruzzo, central Italy: *Jacobaea vulgaris* subsp. *gotlandica* (Neuman) B. Nord., *Klasea lycopifolia* (Vill.) Á.

Löve & D. Löve. (*Asteraceae*), and two endemic species, *Astragalus aquilanus* Anzal. (*Fabaceae*) and *Iris marsica* I. Ricci & Colas. (*Iridaceae*).

Two other contributions are focused on plants from North Italy, reporting germination protocols for four taxa. Germination data for *Campanula raineri* Perp. (*Campanulaceae*), a stenoendemic chasmophyte of the Italian calcareous Prealps, are reported by Villa & al. (2021, No. 48). Cucchiatti & al. (2021, Nos. 60-62) reported the germination requirements of seeds of three segetal plant species collected in the Italian Western Alps, Piedmont: *Agrostemma githago* L. (*Caryophyllaceae*), *Bupleurum rotundifolium* L. (*Apiaceae*), and *Xeranthemum inapertum* (L.) Mill. (*Asteraceae*).

Oikonomidis & Thanos (2021, No. 49) successfully tested several media to improve symbiotic germination performance in seeds of *Anacamptis sancta* (L.) R.M. Bateman, Pridgeon & M.W. Chase (*Orchidaceae*) from Greece.

Buhagiar & al. (2021, Nos. 54-58) described germination protocols for five species of the Maltese Islands, predominantly occurring in coastal garrigue habitats: *Drimia maritima* (L.) Stearn (*Asparagaceae*), *Periploca angustifolia* Labill. (*Apocynaceae*), *Asparagus aphyllus* L. (*Asparagaceae*), *Myrtus communis* L. (*Myrtaceae*), and *Pancratium maritimum* L. (*Amaryllidaceae*).

Germination protocols for 18 other taxa from Sicily are reported in: Gugliuzza & al. (2021, No. 59) which provide the first germination reports for *Thymus richardii* subsp. *nitidus* (Guss.) Jalas (*Lamiaceae*), endemic to Marettimo; Carruggio & al. (2021, Nos. 70-74), where the germination behaviour of five *Euphorbia* species is described, i. e. *E. hirsuta* L., *E. platyphyllos* L., and the endemic *E. ceratocarpa* Ten., *E. gasparrinii* Boiss. subsp. *gasparrinii*, and *E. meuselii* Geltman (*Euphorbiaceae*); Salmeri & Brullo (2021, Nos. 75-85) reported germination data for 11 endemic *Helichrysum* (*Asteraceae*) from Sicily: *H. archimedeeum* C. Brullo & Brullo ex Greuter, *H. errerae* Tineo, *H. hyblaicum* Brullo, *H. italicum* subsp. *siculum* (Jord. & Fourr.) Galbany, L. Sáez & Benedí, *H. litoreum* Guss., *H. nebrodense* Heldr., *H. panormitanum* Tineo ex Guss. subsp. *panormitanum*, *H. panormitanum* subsp. *messeriae* (Pignatti) C. Brullo & Brullo, *H. panormitanum* var. *stramineum* (Guss.) Raimondo, *H. preslianum* C. Brullo & Brullo subsp. *compactum* (Guss.) Guarino & Ilardi, *H. stoechas* (L.) Moench, while Magrini & al. (2021, Nos. 63-65) reported germination data for *Salsola soda* L. from Sicily, together with other two halophytes from Central Italy: *Salsola squarrosa* subsp. *controversa* (Tod. ex Lojac.) Mosyakin and *S. tragus* L. subsp. *tragus* (*Amaranthaceae*).

The “Mediterranean plant germination reports” column is becoming a useful tool for researchers, conservationists, botanists, and other specialists, providing species-specific information on the pre-treatments and key factors to enhance germination of native seeds. Moreover, these germination data will flow into an online, open-access database managed by the RIBES association to make them available to a wider audience.

For the preparation of the manuscript, 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.

References

- Buhagiar, J. A., Lamoliere, A. & Iannaccone, M. 2021: Seed germination reports for coastal and inland garrigue species from the Maltese Islands. – *Fl. Medit.* **31**: 283-290. <http://dx.doi.org/10.7320/FIMedit31.283>
- Carruggio, F., Impelluso, C., Castrogiovanni, M. & Cristaudo, A. 2021: Germination behavior in some Sicilian species of *Euphorbia*. – *Fl. Medit.* **31**: 315-321. <http://dx.doi.org/10.7320/FIMedit31.315>
- Cucchiatti, A., Lonati, M., Gallino, B., Carasso, V. & Mucciarelli, M. 2021: Germination requirements of three segetal species of the Italian flora. – *Fl. Medit.* **31**: 294-298. <http://dx.doi.org/10.7320/FIMedit31.294>
- Di Cecco, V., Frattaroli, A. R., Di Musciano, M., Di Santo, M. & Di Martino, L. 2021: Seed germination reports for Policy species in central Apennines. – *Fl. Medit.* **31**: 277-282. <http://dx.doi.org/10.7320/FIMedit31.277>
- Gugliuzza, G., Domina, G. & Giovino, A. 2021: Seed germination of *Thymus richardii* subsp. *nitidus* (*Lamiaceae*). – *Fl. Medit.* **31**: 291-293. <http://dx.doi.org/10.7320/FIMedit31.291>
- Magrini, S. & Salmeri, C. (eds) 2019: Mediterranean plant germination reports – 1. – *Fl. Medit.* **29**: 269-306. <http://dx.doi.org/10.7320/FIMedit29.269>
- , Alonso Simón, A., Zucconi, L. & Cristaudo, A. 2021: Seed germination protocols for the genus *Salsola* (*Amaranthaceae*) in Italy. – *Fl. Medit.* **31**: 299-304. <http://dx.doi.org/10.7320/FIMedit31.299>
- Oikonomidis, S. & Thanos, C. A. 2021: Germination of *Anacamptis sancta* (*Orchidaceae*) in nutrient media, water agar and various light regime. – *Fl. Medit.* **31**: 271-276. <http://dx.doi.org/10.7320/FIMedit31.271>
- Pierce, S., Bellingardi, J., Villa, S., Ferrario, A., Armiraglio, S., Cerabolini, B. E. L. & Ceriani, R. M. 2021: Seed germination protocols for four species of the EU Habitats Directive from northern Italy. – *Fl. Medit.* **31**: 305-314. <http://dx.doi.org/10.7320/FIMedit31.305>
- Porceddu, M., Barros Torres, S. & Bacchetta, G. 2021: Seed germination reports for *Teucrium marseilleense* and *T. flavum* subsp. *glaucum* (*Lamiaceae*). – *Fl. Medit.* **31**: 264-266. <http://dx.doi.org/10.7320/FIMedit31.264>
- Salmeri, C. & Brullo C. 2021: Seed germination reports for Sicilian endemic taxa of the genus *Helichrysum* (*Asteraceae*). – *Fl. Medit.* **31**: 322-333. <http://dx.doi.org/10.7320/FIMedit31.322>
- Villa, S., Ceriani, R. M., Cerabolini B. E. L. & Pierce, S. 2021: Germination response across populations of the stenoendemic chasmophyte *Campanula raineri* (*Campanulaceae*). – *Fl. Medit.* **31**: 267-270. <http://dx.doi.org/10.7320/FIMedit31.267>

Addresses of the editors:

Dr. Sara Magrini*, 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

*RIBES, Rete Italiana Banche del germoplasma per la conservazione Ex Situ della flora italiana, www.reteribes.it