

Besma Dechir & Tarek Hamel

***Amaryllis belladonna* (Amaryllidaceae), a new alien to the flora of Algeria**

Abstract

Dechir, B. & Hamel, T.: *Amaryllis belladonna* (Amaryllidaceae), a new alien to the flora of Algeria. — Fl. Medit. 31: 19-22. 2021. — ISSN: 1120-4052 printed, 2240-4538 online.

Amaryllis belladonna (Amaryllidaceae) a new established xenophyte to Algerian flora is here reported for the first time from El Kala National Park (North-eastern of Algeria). This new report is the second record for North Africa.

Key words: geophytes, petaloid Monocots, xenophytes, North Africa.

Introduction

Among Mediterranean countries, Algeria is well-known for its diverse vegetation and high floristic richness (Battandier 1888-1890; Maire 1959; Quézel & Santa 1962-1963), with a flora balance of 3139 species corresponding to 3744 taxa. Dobignard & Chatelain (2010-2013) accounted 4449 taxa, where 3951 are identified as indigenous to North Africa. However, since the 20th century numerous important taxonomic discoveries at national or even North African scale, have been recorded (see e.g. de Bélair & Véla 2011; de Bélair & al. 2012; Véla & de Bélair 2013; Hamel & Boulemtafes 2017a, 2017b; Boulemtafes & al. 2018; Rebbas & al. 2019). Meanwhile, several xenophytes new to the Algerian flora were reported (see e.g. Véla & al. 2013; Hamel & Azzouz 2018; Touati & al. 2020; Hamel & al. 2020; Meddour & al. 2020; El Mokni & Saci 2020).

In continuation with our previous botanical research within El Kala National Park (see e.g. Dechir & al. 2019; Dechir 2019), we present here a new non-native species for Algeria.

Context of the discovery

During botanical surveys in the extreme North-eastern of Algeria, specifically within El Kala National Park, the authors encountered a population (about fifty individuals on an area of almost 100 m²) of a little-known bulbous species that was observed growing spontaneously, for the first time. Subsequent observations were carried during the years 2016,

2017 and 2020, and photographs of the plant in its blooming period were taken. The plant was referred to genus *Amaryllis* and some specimens, from the margin of a cork oak forest (*Quercus suber* L.) in the region of El Kala (Fig. 1) were taken to laboratory for precise identification. Two of the collected blooming specimens have been displayed in the Department of Biology Herbarium at Badji Mokhtar University Annaba (Algeria).

Morphological characters of this *Amaryllis* were measured and compared to data reported in the literature for *Amaryllis* L. in North Africa (Maire 1959; El Mokni & al. 2020). The plant was identified as *Amaryllis belladonna* L. (Fig. 2).

Native habitat and distributive range

Amaryllis is a small genus of terrestrial bulbous geophytes. It comprises only two species namely *Amaryllis belladonna* L. and *A. paradisiicola* Snijman (cf. El Mokni & al. 2020). Among them, *A. belladonna*, a native to the Western Cape region of South Africa (Bond & Goldblatt 1984) has been identified to be naturalized in Western Australia, California, and New Zealand where the plant is locally escaped from abandoned gardens and cut-flower crops (Duncan & al. 2016). The taxon was also reported from several Mediterranean countries (Portugal, Corse, Italy) as casual to locally naturalized alien (Huber 1998; Galasso & al. 2018; WCSP 2020). For North Africa, the plant was recently reported from Tunisia as a first record (El Mokni & al. 2020), it is here its second record as naturalized to North Africa from Algeria (Dobignard & Chatelain 2011; APD2020).

Interest of the discovery

The newly discovery of *Amaryllis belladonna* as naturalized alien in Algeria enriches the national bulbous flora and encourages further botanical investigations for an extensive inventory of the vascular flora.

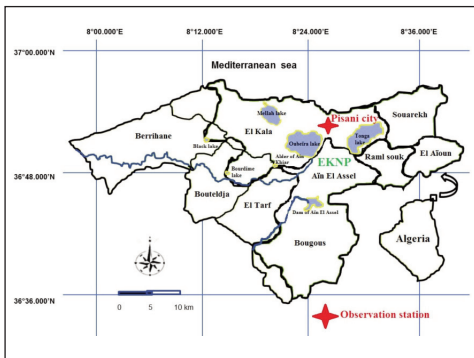


Fig. 1. Locality of the site of occurrence of *Amaryllis belladonna* in Algeria. Fig. 2. *Amaryllis belladonna*, detail of the flowe in 14-09-2020. Photo: B. Dechir.

References

- APD 2020: African Plant Database (version 3.4.0). Conservatoire et Jardin botaniques. – Genève. <https://www.ville-ge.ch/musinfo/bd/cjb/africa/recherche.php>. [Last accessed 20/06/2020].
- Battandier, J. A. 1888-1890: Flore d'Algérie: Ancienne flore d'Alger transformée (Dicotyledones). – Alger.
- Bond, P. & Goldblatt, P. 1984: Plants of the Cape Flora: a descriptive catalogue. – Cape Town, South Africa.
- Boulemtafes, A., Hamel, T., de Bélair, G. & Véla, E. 2018: Nouvelles données sur la distribution et l'écologie de seize taxons végétaux du littoral de la péninsule de l'Edough (Nord-Est algérien). – Bull. Soc. Linn. de Prov. **69**: 59-76. <https://doi.org/10.3406/htn.1992.2379>
- de Bélair, G. & Véla, E. 2011: Découverte de *Nymphoides peltata* (Gmel) O. Kuntze (*Menyanthaceae*) en Afrique du Nord (Algérie). – *Poiretia* **3**: 1-7.
- , Belouahem, F., Belouahem-Abed, D. & Véla, E. 2012: Première signalisation d'*Allium commutatum* Guss. (*Alliaceae*) sur le continent africain (Algérie). – *Lagascalia* **32**: 312-314.
- Dechir, B. 2019: Ecologie et inventaire des plantes bulbeuses au niveau de Kroumirie Nord Est Algérien. Thèse de Doctorat des Sciences Biologiques. – Université Mohamed-Chérif Messaadia-Souk Ahras, Algérie.
- , Chouikh, A., Hamel, T., Azizi, N. N., Ganaoui, N., Grira, A., Abdiouene, A., Maazi, M. C. & Chefrour, A. 2019: Biodiversity of bulbous and tuberous geophytes from the El Kala National Park (North-Eastern Algeria): checklist, vulnerability and conservation. – *Anal. Biol.* **41**: 25-38. <http://dx.doi.org/10.6018/analesbio.41.05>
- Dobignard, A. & Chatelain, C. 2010-2013: Index synonymique et bibliographique de la Flore d'Afrique du Nord, **1-5**. – Genève.
- Duncan, G., Jeppe, B. & Voigt, L. 2016: The *Amaryllidaceae* of Southern Africa. – Kirstenbosch Botanical Gardens, Cape Town, South Africa.
- El Mokni, R., Pasta, S. & Pacifico, D. 2020: *Amaryllis belladonna* L. (*Amaryllidaceae*; *Amaryllidoideae*), first record as naturalised geophyte in Tunisia and North Africa. – *Hacquetia* **19**: 331-336. <https://doi.org/10.2478/hacq-2020-0011>
- & Saci, A. 2020: *Opuntia dejecta* Salm-Dyck – Pp. 310-311 in: Raab-Straube, E. von & Raus, Th. (ed.), Euro+Med-Checklist Notulae, 12 [Notulae ad floram euro-mediterraneam pertinentes No. 41]. – *Willdenowia* **50**: 305-341. <https://doi.org/10.3372/wi.50.50214>
- Galasso, G., Conti, F., Peruzzi, L., Ardenghi, N.M.G., Banfi, E., Celesti-Grapow, L., Albano, A., Alessandrini, A., Bacchetta, G., Ballelli, S., Bandini Mazzanti, M., Barberis, G., Bernardo, L., Blasi, C., Bouvet, D., Bovio, M., Cecchi, L., Del Guacchio, E., Domina, G., Fascetti, S., Gallo, L., Gubellini, L., Guiggi, A., Iamonico, D., Iberite, M., Jiménez-Mejías, P., Lattanzi, E., Marchetti, D., Martinetto, E., Masin, R.R., Medagli, P., Passalacqua, N.G., Peccenini, S., Pennesi, R., Pierini, B., Podda, L., Poldini, L., Prosser, F., Raimondo, F.M., Roma-Marzio, F., Rosati, L., Santangelo, A., Scoppola, A., Scortegagna, S., Selvaggi, A., Selvi, F., Soldano, A., Stinca, A., Wagensommer, R.P., Wilhalm, T. & Bartolucci, F. 2018: An updated checklist of the vascular flora alien to Italy. – *Pl. Biosyst.* **152**: 556-592. <https://doi.org/10.1080/11263504.2018.1441197>
- Hamel, T. & Boulemtafes, A. 2017a: Découverte d'une endémique tyrrhénienne *Soleirolia soleirolii* (*Urticaceae*) en Algérie (Afrique du Nord). – *Fl. Medit.* **27**: 185-193. <https://doi.org/10.7320/FlMedit27.185>
- & — 2017b: Nouvelle station de *Sixalix farinosa* (Coss.) Greuter et Burdet dans la péninsule de l'Edough (Nord-Est algérien). – *Bull. Soc. Linn. Prov.* **68**: 1-9.
- & Azzouz, Z. 2018: Découverte de *Gamochoeta antillana* (*Asteraceae*) en Numidie orientale (El Tarf-Algérie). – *Fl. Medit.* **28**: 155-164. <https://doi.org/10.7320/FlMedit28.155>

- , Bellili, A. M., Boutabia, L. & Telailia, S. 2020: L'arctothèque souci (*Arctotheca calendula*): une nouvelle espèce exotique pour la flore algérienne. – Fl. Medit. **30**: 137-142. <https://doi.org/10.7320/FIMedit30.137>
- Huber, H. 1998: Flowering Plants, Monocotyledons. – Berlin.
- Maire, R. 1959: Flore d'Afrique du Nord, **6**. – Paris.
- Meddour, R., Sahar, O. & Fried, G. 2020: A preliminary checklist of the alien flora of Algeria (North Africa): taxonomy, traits and invasiveness potential. – Bot. Lett. **3**: 1-18. <https://doi.org/10.1080/23818107.2020.1802775>
- Quézel, P. & Santa, S. 1962-1963: Nouvelle flore d'Algérie et des régions désertiques méridionales, **1-2**. – Paris.
- Rebbas, K., Véla, E., Bougaham, A.F., Belharrat, A., de Bélaïr, G. & Prelli, R. 2019: Découverte de *Christella dentata* (*Thelypteridaceae*) en Algérie. – Fl. Medit. **29**: 55-66. <https://doi.org/10.7320/FIMedit29.055>
- Touati, L., Hamel, T. & Meddad-Hamza, A. 2020: Sur la présence d'*Atriplex canescens* (*Amaranthaceae*) en Algérie: écologie, taxonomie et biogéographie. – Fl. Medit. **30**: 33-38. <https://doi.org/10.7320/FIMedit30.033>
- Véla, E. & de Bélaïr, G. 2013: Découverte de *Galium verrucosum* subsp. *halophilum* (Ponzo) Lambinon (Rubiaceae) en Afrique du Nord (Algérie). – Lagasalia **33**: 350-353.
- , Rebbas, K., Meddour, R. & de Bélaïr, G. 2013: Note sur quelques xénophytes nouveaux pour l'Algérie (et la Tunisie). – Addenda **5**: 372-376.
- WCSP (World Checklist of Selected Plant Families) 2020: Facilitated by the Royal Botanic Gardens, Kew. – <http://wcsp.science.kew.org/> [Last Accessed 30/07/2020].

Addresses of the authors:

Besma Dechir^{1*} & Tarek Hamel²,

¹ Department of Biology, Faculty of Natural Sciences and Life, Mohamed-Cherif Messaadia

University, Souk Ahras, Algeria. Email: b.dechir@univ-soukahras.dz

² Laboratory of Plant Biology and Environment, Department of Biology, Faculty of Sciences,

Badji Mokhtar University, Annaba, Algeria. Email: tarek_hamel@yahoo.fr

*Corresponding author