# Romulea bocchierii Frignani & Iiriti (Iridaceae) : a new species from Sardinia (Italy)

# Romulea bocchierii Frignani & Iiriti (Iridaceae), a new species from Sardinia (Italy)

**Flavio Frignani & Gianluca Iiriti**

## Abstract

FRIGNANI, F. & G. IIRITI (2008). Romulea bocchierii Frignani & Iiriti (Iridaceae), a new species from Sardinia (Italy). *Candollea* 63: 253-260. In English, English and French abstracts.

*Romulea bocchierii* Frignani & Iiriti, a new species from Sardinia (Italy), is described. Its taxonomic relationships with the close species *Romulea ligustica* Parl. and *Romulea requienii* Parl. are presented. An analytical identification key and a distribution map are given. This new species has been found in a humid meadow in the Codoleddu upland, a few kilometres from Cagliari. It appears to be endemic to SE Sardinia and is related to *Romulea bulbocodium* (L.) Sebast. & Mauri only present in the NE part of the island. The recognition of *Romulea bocchierii* is claimed on the basis of anatomical, morphological, ecological and phytogeographical data. Because some other endemic species of the genus *Romulea* Maratti are known for Sardinia, the finding of this new taxon is important to understand the systematic and phytogeography of this genus in Italy.

## Résumé

FRIGNANI, F. & G. IIRITI (2008). Romulea bocchierii Frignani & Iiriti (Iridaceae), une nouvelle espèce de Sardaigne (Italie). *Candollea* 63: 253-260. En anglais, résumés anglais et français.

*Romulea bocchierii* Frignani & Iiriti est décrite de Sardaigne (Italie). Ses rapports taxonomiques avec les espèces voisines *Romulea ligustica* Parl. et *Romulea requienii* Parl. sont discutés. Une clé d'identification analytique ainsi qu'une carte de distribution sont fournies. Cette nouvelle espèce a été découverte dans une prairie humide sur le haut plateau de Codoleddu à quelques kilomètres de Cagliari. Elle est endémique du SE de la Sardaigne et est affine à *Romulea bulbocodium* (L.) Sebast. & Mauri, présent seulement dans la partie NE de l'île. La reconnaissance de *Romulea bocchierii* est basée sur des données anatomiques, morphologiques, écologiques et phytogéographiques. En raison de la présence d'autres espèces du genre *Romulea* Maratti en Sardaigne, la découverte de ce nouveau taxon est importante pour comprendre la phytogéographie et la systématique de ce genre en Italie.

## Key-words

*IRIDACEAE* – *Romulea* – Sardinia – Endemic flora – Taxonomy

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Received on January 10, 2008. Accepted on September 25, 2008.

## Introduction

The genus *Romulea* Maratti (*Iridaceae* Juss.) was stated by MARATTI (1772) on the basis of a species found in the surroundings of Rome and included at first in the genus *Crocus* L. and then in the genus *Ixia* L. (LINNAEUS, 1753, 1762). It comprises beetween 70 and 90 species, depending on the opinion of authors (BÉGUINOT, 1907, 1908, 1909; MARAIS, 1980; MANNING & GOLDBLATT, 2001). A very patchy area of distribution and evident differentiation centres are shown by this genus. The first of them occurring in the Cape Region where more than 40 species of *Romulea* are present, and the second comprises the South Mediterranean Province and the Atlantic European Province in the Holarctic kingdom, according to the phytogeographical synthesis of TAKHTAJAN (1986). BÉGUINOT (1908) divided the genus *Romulea* into 15 "stirps" on the basis of classic morphological characters such as the colour and the size of the flower, the arrangement of vascular bundles in basal and cauline leaves as well as the reproductive biology and chorology of the different species.

Although some studies on Mediterranean species of *Romulea* have been published (MARAIS, 1984; RITA, 1989-1990; TURLAND & al., 1993; EROL & KÜÇÜKER, 2003; FIELDING & TURLAND, 2005), no accurate or exhaustive revisions of the Euro-Mediterranean species are available at present. Sardinia is an extremely interesting region since it is a very important area in the middle of the Western Mediterranean in terms of genetic exchange between different populations, hybridization and speciation. At present 9 spontaneous and 1 exotic taxonomic units of the genus *Romulea* can be found in Italy (PIGNATTI, 1982; CONTI & al., 2005): *Romulea bulbocodium* (L.) Sebast. & Mauri, *R. columnae* Sebast. & Mauri, *R. ligustica* Parl., *R. limbarae* Bég., *R. linaresii* Parl., *R. ramiflora* Ten., *R. requienii* Parl., *R. revelieri* Jord. & Fourr., *R. rollii* Parl. and *R. rosea* (L.) Eckl. Sardinia is the only Italian region with all the spontaneous species except *R. linaresii*, endemic to Sicily. The high number of entities in the islands of this part of the Mediterranean is also confirmed by recent studies on Corsica (GAMISANS & al., 1994; JEANMONOD & GAMISANS, 2007) where 7 taxa can be found, 6 of which are shared with Sardinia. During the floristic study in south-eastern Sardinia, a population of *Romulea* was found, which could be identified as *R. bulbocodium* at first. However, a more detailed examination allowed us to point out several differences which enabled us to make a distinction against the "real" *R. bulbocodium* although such differences belonged in many respects to the internal variability of *R. bulbocodium* s.l. Anatomical, morphological, ecological and phytogeographical investigations led us to consider this population as an independent species, new to science, here described and compared with the close *R. bulbocodium, R. bulbocodium* var. *leichtliniana* (Halácsy) Bég., *R. ligustica* and *R. requienii*.

***Romulea bocchierii*** Frignani & Iiriti, **spec. nova** (Fig. 1 & 2)

**Typus: ITALY. Sardinia:** Altopiano di Codoleddu, Maracalagonis – Sinnai (Province of Cagliari), humid meadow on alluvial soil of granite origin, 735 m, 7.III.2006, *Iiriti & Frignani s.n.* (holo-: CAG; iso-: SIENA).

*Romulea bulbocodium affinis sed foliis caulinis (2-)3(4-5) rectis, junciformis acutis, a lateribus 4-sulcatis, 10-35 (-40) cm longis; perigonio magno, 25-35 mm longo, fauce lutea, laciniis albidis, cum striis purpureis vel violaceis a tergo; stigmatibus quam antheris longioribus.*

*Perennial herbs* (15-)20-35(-40) cm tall. *Bulb* asymmetric, ovate or subglobose, covered by light brown tunics with fine parallel fibres on the top, rarely proliferous. *Scape* semiterete (4-5 cm), single and uniflorous, erect and reddish on the top, shorter than leaves; sometimes 1 or 2 secondary scapes are observed which stem from the same bulb and are wrapped in the same tunics as the main scape. *Basal leaves* 2, reduced to whitish sheaths wrapping the scape; *cauline leaves* 3, rarely 2 or 4-5, subterete, erect, rushlike, sharp, 4-grooved, 10-35 (-40) cm × 0.7-1.0 mm. *Bracts* lanceolate and subequal (17-19 mm); lower bract herbaceous with a very narrow scarious margin, upper bract almost entirely scarious with two herbaceous veins sometimes confluent. *Perianth* (25-35 mm) with yellow-greenish throat of 5 mm, tepals obovate-elliptical, white with purplish or lilac veins outside. *Anthers* yellow (9 mm), stylus subequalling or just above the top of anthers; pollen yellow; stigmas always overtopping the anthers, divided into 3 bifurcate laciniae, each of them bearing a double row of papillae. *Capsule* globose or obovate.

*Etymology.* – This new species is dedicated to Prof. Emanuele Bocchieri (Cagliari, Italy), teacher and specialist of the Sardinian flora.

*Phenology.* – Leaves appear after the rain period, autumn and early winter; blossoming mostly takes place in March. Anthesis is present until early April in very few individuals. The ripening of capsules and the following desiccation of epigean parts reach completion in the second half of May.

*Distribution and suggested conservation status.* – Endemic to SE Sardinia (Cagliari Province) and of Central Mediterranean element (Fig. 3). This species seems to be extremely rare and local and it should be classified as Endangered (EN) (IUCN, 2001) because of its strictly local distribution even though its only known population is very large.

*Ecology.* – This species is typical of particular humid areas where the impermeability of the substratum leads to the formation of humid meadows, small depressions covered with water and swamps which remain as such in winter and spring and dry out completely in summer. This ecological situation occasionally characterizes Sardinian siliceous rises. The species was found in a mountain basin situated in SE Sardinia at an

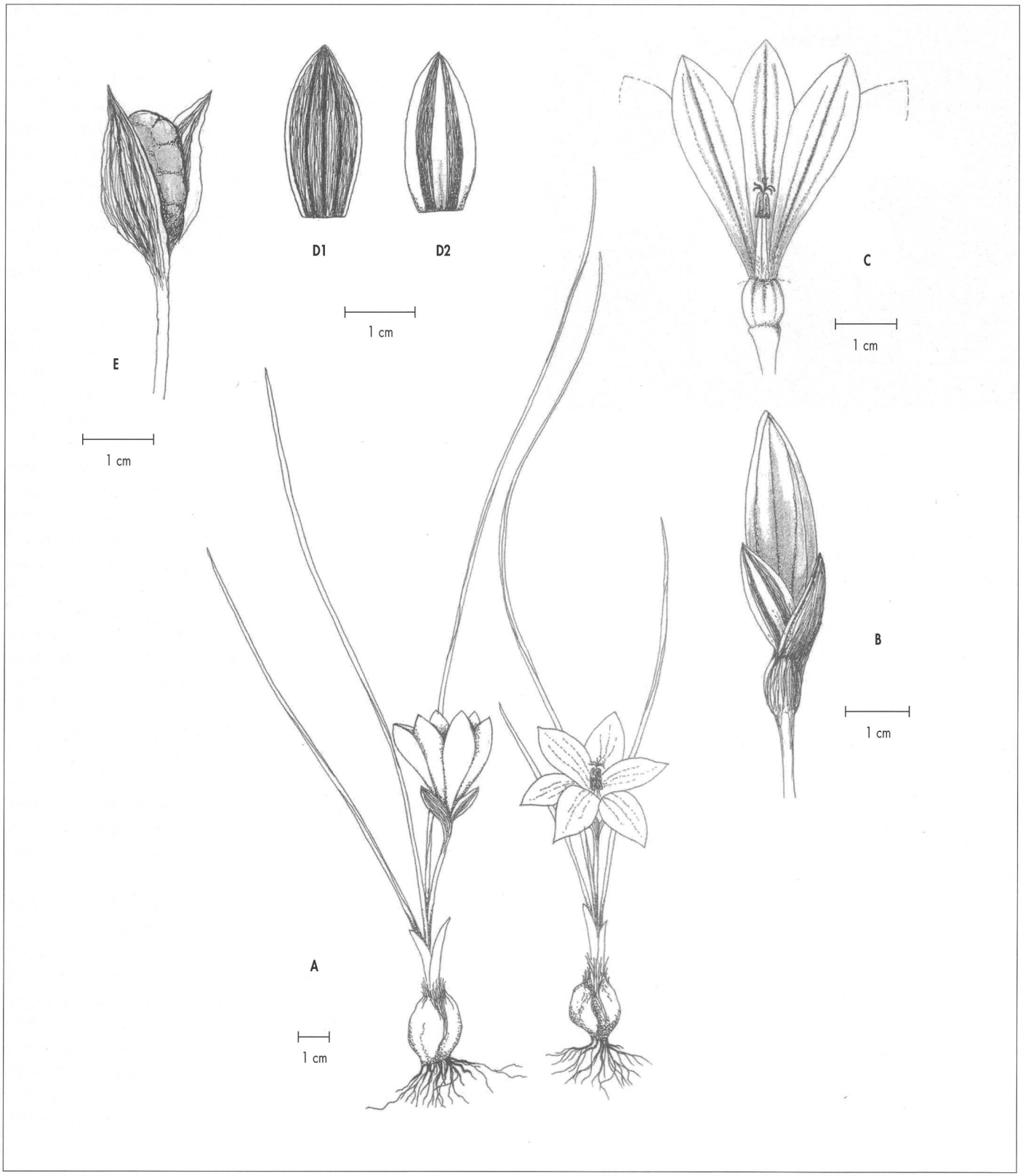


**Fig. 1.** – *Romulea bocchierii* Frignani & Iiriti. **A.** Habit; **B.** Flower before anthesis; **C.** Flower; **D.** Flower bracts (D1 lower, D2 higher); **E.** Fruit.
[*Iiriti & Frignani s.n.*, CAG] [Drawn by Flavio Frignani]

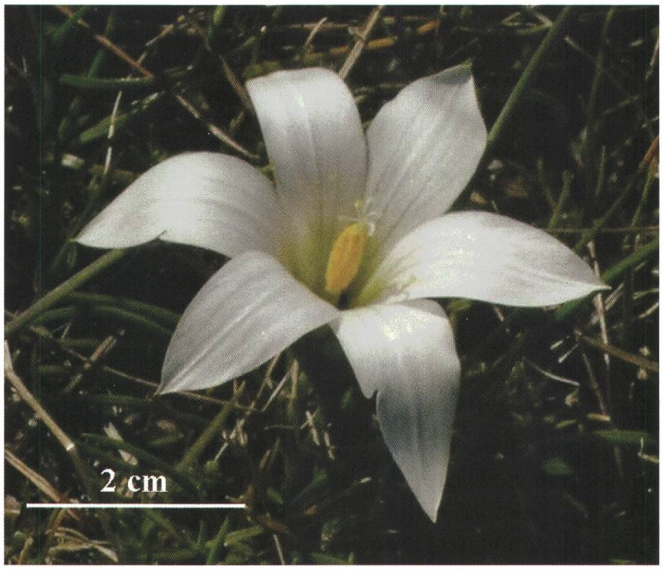


**Fig. 2.** – *Romulea bocchierii* Frignani & Iiriti in wild.
[Picture by Gianluca Iiriti]

altitude of 735 m and presenting granite rock outcrops in the surroundings as well as soil formed thanks to their breakdown. The clearings where the species grows have a vegetation cover modified by goat and horse grazing; in particular, there are wild horses on the upland. The species can be found especially in extremely humid areas, where several taxonomic units are present. *Ranunculus peltatus* Schrank s.l. blooms in those spots where water stagnates in late winter, whereas in swampy areas of the upland we can find grasslands of *Scirpoides holoschoenus* (L.) Soják, *Juncus effusus* L., with the addition of *Narcissus tazetta* L., *Ranunculus macrophyllus* Desf., *Orchis laxiflora* Lam., *Romulea ligustica* Parl., *Oenanthe lisae* Moris, *Potentilla reptans* L., *Mentha pulegium* L. and *Bellium bellidioides* L. in spring and summer. Along streams and in the proximity of springs are riparian nuclei of *Salix atrocinerea* Brot. with *Erica terminalis* Salisb., *Leucojum aestivum* subsp. *pulchellum* (Salisb.) Briq. and *Ranunculus ophioglossifolius* Vill. In the surroundings, where the soil is more permeable, are vast, low shrub formations of *Cistus monspeliensis* L., the spreading of which has been promoted by fires, together with single *Pyrus spinosa* Forssk. trees. In the outer part of the upland, vegetation formations are characterized by *Arbutus unedo* L., *Erica arborea* L., with the addition of scattered entities and small nuclei of *Quercus suber* L., which indicate the potential vegetation of the area.

*Taxonomic position with related species.* – The genus *Romulea* is distinguished from other genera of the *Iridaceae* by its high degree of polymorphism. In the last two centuries this has led several botanists to try and develop as natural a classification system as possible while taking into account the high degree of intraspecific variability, the frequent hybridizations and the ability to form scattered populations made of numerous entities in a small area and with morphological adaptations to climatic and edaphic conditions (Persoon, 1805-1807; Parlatore, 1858; Klatt, 1865-1866; Jordan & Fourreau, 1866; Baker, 1892; Béguinot, 1909; Maire, 1960; Goldblatt, 1975; Goldblatt, 1990; Gamisans & al., 1994). Starting from a rough subdivision made by Béguinot (1909), Fiori (1923-1929) proposed to create two large sections, sect. *Gerontogeae*, which comprises Mediterranean-Atlantic species (3 species and 13 intraspecific *taxa* for the Italian flora) and sect. *Austroafricanae* (Fiori, 1923-1929), represented in Italy by one species, *Romulea purpurascens* (Ten.) Ten., which has not become naturalized after its introduction in various Italian Botanical Gardens.

On the basis of anatomical and ontogenetic evidence, Béguinot (1909) had already proposed a subdivision of Mediterranean-Atlantic species into 7 groups, called "Stirpes". In the past, such subdivisions were broadly used in evolution studies although they do not correspond to any taxonomic rank nowadays acknowledged *(subgenus, sectio, subsectio)*. More specifically, the *Bulbocodii* Stirps included: *Romulea bulbocodium,* widespread in the Central-Eastern Mediterranean; *R. ligustica*, which can be found in Liguria, Sardinia, Corsica and Nord-Western Africa (Moret & al., 1993), *R. limbarae*, endemic to Mount Limbara in Sardinia (Béguinot, 1907) and maybe the result of the hybridization of *R. ligustica* with *R. requienii* (Diana Corrias, 1983), *R. uliginosa* Kuntze and *R. clusiana* (Lange) Nyman, vicariants of *R. bulbocodium* in the Iberian Peninsula, *R. grandiscapa* Baker, endemic to the Canary Islands and Madeira as well as other species (e.g. *R. engleri* Bég., *R. battandieri* Bég., *R. crocea* Boiss. & Heldr., *R. major* (Schousb.) A. Marin or *R. maroccana* Bég.) which can be found in the Southern and Eastern Mediterranean (Béguinot, 1908; Fennane & Ibn Tattou, 1998).

In our opinion, however, *R. requienii* should be included in this group, too, while waiting for a thorough revision of the genus, because of the size of its perigonium and the length of its style compared to the stamina.

The initial species of this group is thought to be *R. bulbocodium*, which in turn has a high degree of intraspecific variability, to the extend that Béguinot (1909) himself described for it 9 varieties in addition to the typical one and that it is today defined by over 13 synonyms. Indeed perianth length, style length and spatial arrangement of leaves vary in the same population. Even tepal colour can be very incostant; some specimen of *R. bulbocodium* on Mount Limbara (CN Sardinia) show violet-withish tepals while in other part of Italy (e.g. Tuscan Coast) the same species shows completely purple tepals. The throat is always deep yellow.

From the reproductive point of view, *R. bulbocodium* can be both monomorphic (hermaphrodite) and dimorphic (gynodioecious) (Moret & al., 1993; Moret & al., 2000).

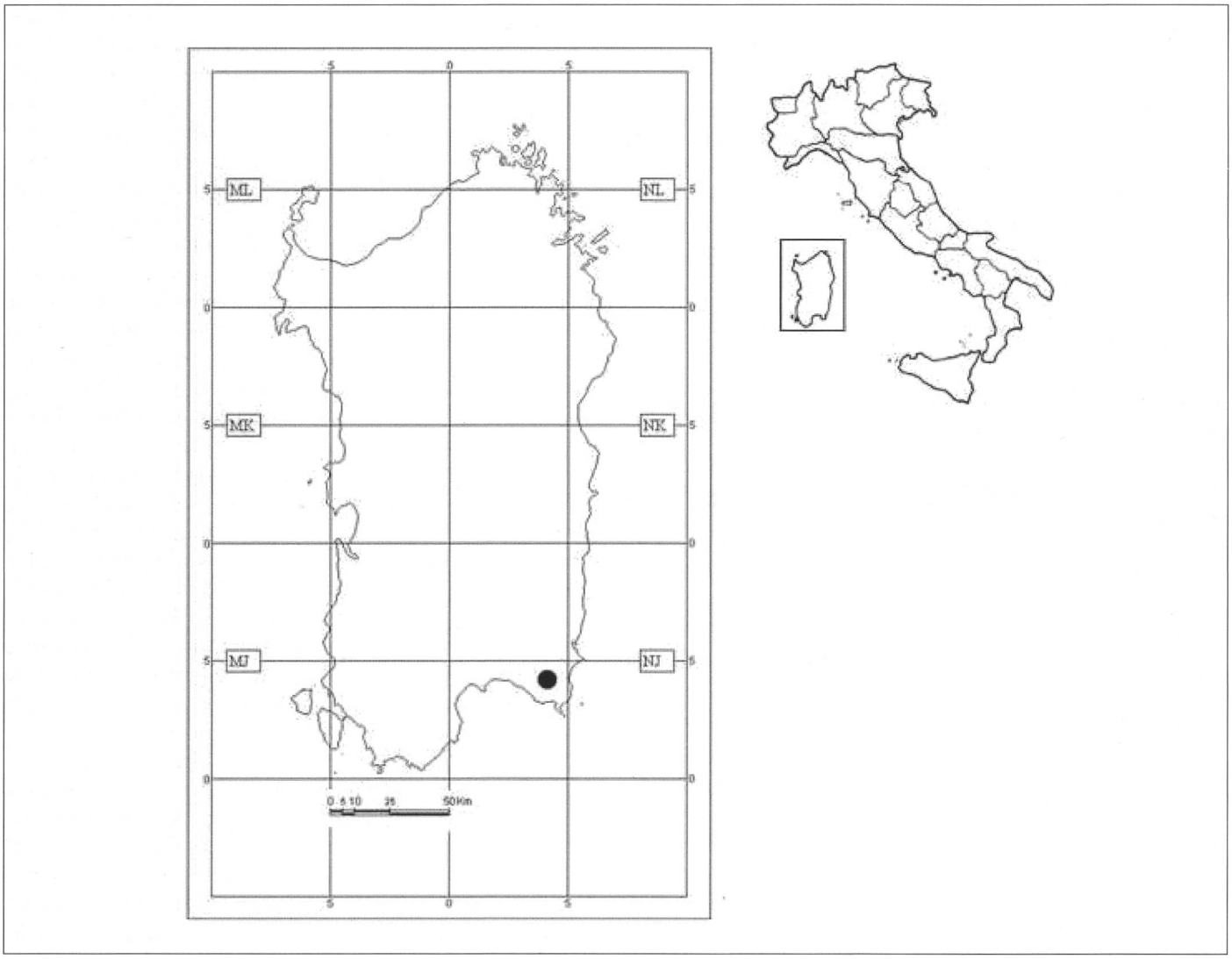


**Fig. 3.** – Geographical distribution of *Romulea bocchierii* Frignani & Iiriti in Sardinia.

*Romulea bocchierii* can be easily distinguished from *R. bulbocodium* by some morphological and ecological features (Table 1). First of all, the plant appears very vigorous on the whole and reaches a height of over 40 cm when considering its leaves, too; its scape is always uniflorous, a feature that can rarely be found in *R. bulbocodium;* its cauline leaves (normally 3) are always erect or erecto-patent at most, cylindrical-grooved and rushlike, acute at the apex. Interestingly, this leaf morphology is one of the distinguishing features between African and Boreal species, which generally have patent leaves, bent downwards or, especially in those species found on sandy soils, fully prostrate along the ground. The perigonium is very large (up to 35 mm in length) and tepals are almost always white internally and violet outside before anthesis; after blossoming they become white-greenish with violet stripes. The throat in *R. bulbocodium* is deep yellow, of the same colour of anthers, while in *R. bocchierii* it is yellow-greenish, with yellow anthers. We have found hermaphrodites plants only which enabled us to exclude gynodioecy in this species. The fruit-bearing peduncles tend to remain erect or just slightly curved but never twisted in the shape of a spiral and the fruits are usually fertile. Nevertheless we can't exclude "a priori" that this new entity is a result of hybridization. From an ecological point of view, this species can be found on siliceous substrata with a high degree of surface moisture or almost completely flooded during the reproduction period.

The East Mediterranean white-flowered *R. bulbocodium* var. *leichtliniana* (Halácsy) Bég. was described on specimen from Laconia (South Greece); it has white tepals but yellow throat as *R. bulbocodium*, both bracts almost completely scarious and stigmas' laciniae more deeply bifurcate. These characters allow to distinguish it from *R. bocchierii*.

*Intraspecific variability.* – At present the species described comprises a single population occupying a surface of around 1 km$^2$. *Romulea ligustica* grows in the same station, but its anthesis takes place at a different time, because when *R. bocchierii* is in the final phase of its blossoming (end of March), the anthesis period of *R. ligustica* normally starts. Depending on the various climate phenomena like sudden, extremely cold weather with brief snowfalls, such overlapping period, going from the end of March to the first days of April, may be absent. The closest stations of *R. requienii* are several kilometres away and are mainly situated along the coastal strip; this indicates an adequate level of geographic isolation. On the basis of morphological data collected from 2004 to 2006, however, some intraspecific variability has been observed; some individuals, very few, indeed, have various floral scapes, for example; in fact, the cross section of some bulbs was examined and it was observed that outer tunics are actually shared by 2 or more bulbs, which, however, have their own cataphylls; moreover, these plants can have a variable number of leaves, normally up to 5. In this case it is presumed that the leaf primordia of the stem give rise to bulbils, in a first attempt at vegetative reproduction, instead of cataphylls, i.e. coriaceous tunics wrapping the bulb. Floral scapes are always uniflorous (see appendix 1 for the *specimina visa*).

*Phytogeography and perspectives.* – Limited to Nord-Western Mediterranean, the species wich are closer to *R. bocchierii* show an interesting distribution on the two largest islands of the Western Mediterranean (Corsica and Sardinia), with links to the Italian Peninsula through the Tuscan Archipelago. *Romulea requienii*, for example, is a Tyrrhenian endemic species which can be found in Sardinia and Corsica but has also been reported along the Tuscan coast (Chiarugi, 1928; Diana Corrias, 1983). It easily lives on various substrata and in Sardinia it grows at an altitude that ranges from sea level to the highest mountains. It can be found both in damp or temporarily flooded montane meadows and in dry spots along the coast. In SE Sardinia only coastal populations are known, which are situated far from the only station of *R. bocchierii*. As far as *R. ligustica* is concerned, it is widespread in Sardinia but it becomes rarer in Corsica, while in the rest of Italy it can only be found in Liguria. In Sardinia it grows from sea level up to inland montane areas and it often shows an ecological behaviour similar to that of *R. bulbocodium*, which is largely distributed in the central and southern part of the Italian Peninsula as well as in some regions of Northern Africa. *Romulea corsica* is not present in Sardinia but it is mentioned in this paper since it grows along the coastal strip of Corsica, where it is extremely rare. Its taxonomic position should be examined in that it is probably a natural hybrid between *R. requienii* and *R. revelieri* (Gamisans & al., 1994; Gamisans & Marzocchi, 1996), both present in Sardinia. The absence of *R. bulbocodium* in central and southern Sardinia suggests that *R. bocchierii* is actually its geographic vicariant for the south of the island; such a phenomenon, already known for these plants, makes this and other genera even more interesting, especially when it comes to the phytogeographical knowledge of the Central Mediterranean and to the origin of the flora in Sardinia, Corsica and the Tuscan Archipelago, which are rich in entities related to one another but well differentiated from a morphological point of view. On the basis of what has been said above it is easy to understand that a detailed study should be carried out on all those species growing in the Mediterranean and Atlantic area, given that many of the entities described are either still *"sub judice"* or considered as synonyms of *R. bulbocodium* s.l.

**Table 1.** – Diagnostic morphological characters for *Romulea bocchierii* Frignani & Iiriti and closely related species (*R. bulbocodium* (L.) Sebast. & Mauri, *R. bulbocodium* var. *leichtliniana* (Halácsy) Bég., *R. ligustica* Parl. and *R. requienii* Parl.).

| Characters | Scape | Leaves | Upper bract | Corolla colour | Flower throat | Pollen |
|---|---|---|---|---|---|---|
| ***R. bocchierii*** | Almost uniflorous | Rushlike, erect | Scarious with two herbaceous veins | White | Yellow-greenish, hairy | Yellow |
| ***R. bulbocodium*** | Generally multiflorous | Patent or curved | Scarious with one herbaceous vein | Purplish-Violet | Yellow, hairy | Yellow |
| ***R. bulbocodium* var. *leichtliniana*** | Generally multiflorous | Erect to patent | Scarious with one to two herbaceous veins | White to (rarely) pale lilac | Yellow, hairy | Yellow |
| ***R. ligustica*** | Generally multiflorous | Erect or patent | Scarious with one herbaceous vein | Violet | White, hairy | White |
| ***R. requienii*** | Generally multiflorous | Patent or curved | Scarious with one herbaceous vein | Violet | Violet-whitish, hairy | Yellow |

## Identification key for the italian species of the *Romulea bulbocodium* group

1. White pollen, white or whitish anthers, white throat..... ..... ***R. ligustica***

1a. Yellow pollen, yellow anthers, throat of a different colour ..... 2

2. Violet or purple, sometimes whitish throat, violet laciniae ..... ***R. requienii***

2a. Yellow throat..... 3

3. Uniflorous scape, rushlike, erect cauline leaves, white laciniae, upper spathe with 2 central herbaceous stripes ..... ***R. bocchierii***

3a. Scape generally multiflorous, patent or more or less curved cauline leaves, laciniae violet in the upper part, upper spathe herbaceous in the centre .... ***R. bulbocodium* s.str.**

## Acknowledgements

The authors wish to thank: the curators of CAG, FI, SS, SASSA, SIENA and UTV Herbaria, Prof. Silvana Diana Corrias, Prof. Gianluigi Bacchetta, Dr. Federico Selvi, Dr. Claudia Angiolini for their suggestions; Dr. Luisella Vagaggini and Dr. Benedetta Cinotti for the Latin and French translations.

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**Appendix 1.** – Additional material examined of *Romulea bulbocodium* (L.) Sebast. & Mauri, *R. ligustica* Parl. and *R. requienii* Parl.

***R. bulbocodium.*** – **Sardinia. Sassari:** Sassari, 16.IV.1883, *Marchesetti s.n.* (FI); Tempio Pausania, 26.IV.1903, *Sommier s.n.* (FI); Baddemanna, 2.III.1975, *Atzei s.n.* (SASSA); Salendo a punta Balestrieri, Monte Limbara, Tempio Pausania, 17.VI.1980, *Corrias & Valsecchi s.n.* (SS); Lungo la S.S. 133 Tempio-Palau, ca. km 5, 15.III.1981, *Corrias & Diana s.n.* (SS); Vallicciola, Monte Limbara, Tempio Pausania, 10.IV. 1983, *Villa s.n.* (SS); Su Muvrone, Luras, 20.III.1983, *Lentini s.n.* (SS); Strada Tempio Pausania-Palau, 3.III.2007, *Iiriti & Adamo s.n.* (CAG). **Continental Italy. Tuscany:** Asciano-Monte Pisano (Pisa), 27.II.1979, *Marchetti & Ferrarini s.n.* (SIENA); Castellaro di Carrara (Massa), 21.II.1980, *Marchetti & Ferrarini s.n.* (SIENA); Metato-Alpi Apuane (Lucca), 14.IV.1981, *Marchetti & Ferrarini s.n.* (SIENA); Capalbio (Grosseto), 2.III.1989, *Marchetti, Pagliai & Perini s.n.* (SIENA); Lago di Burano-Capalbio (Grosseto), 27.II.1991, *Riccucci & Angiolini s.n.* (SIENA); Duna Feniglia (Grosseto), 14.III.1991, *Celletti s.n.* (UTV); Monte Labbro (Grosseto), 2.III.1992, *Maccherini s.n.* (SIENA); Monte Cetona (Siena), 1.III.1995, *Mazzeschi s.n.* (SIENA); La Pietra (Grosseto), 12.III.1995, *Chiarucci s.n.* (SIENA); Cornate di Gerfalco-Montieri (Grosseto), 5.III.2000, *Frignani s.n.* (SIENA); Bosco Rocconi-Roccalbegna (Grosseto), 11.III.2005, *Frignani s.n.* (SIENA); Monte Penna-Castellazzara (Grosseto), 21.III.2006, *Frignani & Giallonardo s.n.* (SIENA); Sticciano Scalo (Grosseto), 11.II.2007, *Frignani s.n.* (SIENA). **Latium:** Selva del Lamone (Viterbo), 10.III.1989, *Scoppola* (UTV); Monte Castagneto (Viterbo), 18.III.1989, *Scoppola* (UTV); Riserva Monte Rufeno (Viterbo), 23.II.1997, *Scoppola* (UTV); Barbarano Romano (Viterbo), 9.III.2003, *Mazzenga* (UTV). ***R. ligustica.*** – **Sardinia:** Monte Marganai (Cagliari), II.1861, *Martelli s.n.* (FI); Aritzo (Nuoro), 17.V.1890, *Fiori s.n.* (FI); Porto Liscia (Sassari), III.1895, *Vaccari s.n.* (FI); Orune (Nuoro), 2.IV.1899, *Martelli s.n.* (FI); Monte Limbara (Sassari), 25.IV.1893, *Gestro & Sommier s.n.* (FI); Tempio Pausania (Sassari), 26.IV.1903, *Gestro & Sommier s.n.* (FI); Rizzeddu (Sassari), 23.IV. 1907, Terracciano (SASSA); Campeda (Nuoro), 28.III.1912, *Fiori s.n.* (FI); Monte Limbara (Sassari), 14.III.1912, *Fiori s.n.* (FI); Iglesias (Cagliari), 27..III.1912, *Fiori s.n.* (FI); Monte Santo di Pula (Cagliari), 23.III.1912, *Fiori s.n.* (FI); Sette Fratelli (Cagliari), 1.II.1933, *Martinoli s.n.* (FI); Capo Carbonara (Cagliari), 6.VII.1938, *Forsyth-Mayor s.n.* (FI); Capo S. Elia (Cagliari), 13.III.1946, *Martinoli s.n.* (CAG); Tra Acquafredda e Acquacadda (Cagliari), 21.III.1972, *Atzei s.n.* (SASSA); Monte Santo (Sassari), 21.III. 1976, *Diana s.n.* (SS); Giara di Gesturi (Nuoro), 1.V.1976, *Diana s.n.* (SS); Laconi (Nuoro), 30.IV.1979, *Corrias & Diana s.n.* (SS); Badde Urbara, Santulussurgiu (Oristano), 21.IV.1980, *Camarda s.n.* (SS); Villanova Monteleone (Sassari), 22.III. 1981, *Corrias & Diana s.n.* (SS); Oschiri, presso il Lago Coghinas (Sassari), 10.IV.1983, *Villa s.n.* (SS); Monte Arci (Oristano), 18.IV.1983, *Corrias & Camarda s.n.* (SS); Isola Ogliastra, Lotzorai (Nuoro), 16.III.1984, *Bocchieri s.n.* (CAG); Sorgono (Nuoro), 24.II.1990, *Atzei s.n.* (SASSA); Isola di S. Antioco (Cagliari), 16.III.1991, *Mossa s.n.* (CAG); Mazzanni, Vallermosa (Cagliari), 24.III.2002, *Bacchetta & Soddu s.n.* (CAG); Is Concias, Quartucciu (Cagliari), III.2002, Guarino sub "Romulea requienii revidit Frignani et Iiriti", 9.III.2006, *s.coll.* (CAG); Pranu Canceddas, Villaputzu (Cagliari), 2.IV. 2005, *Iiriti s.n.* (CAG); Arcu 'e Tidu, Sinnai (Cagliari), 10.IV. 2006, *Iiriti s.n.* (CAG); Monte Serpeddì, Sinnai (Cagliari), 23.II.2007, *Iiriti s.n.* (CAG). **Italy. Tuscany:** Duna Feniglia (Grosseto), 14.III.1991, *Celletti s.n.* (UTV). **Latium:** Selva del Lamone (Viterbo), 10.III.1989, *Scoppola s.n.* (UTV); Monte Castagneto (Viterbo), 18.III.1989, *s.coll.* ***R. requienii.*** – **Sardinia:** Gennargentu (Nuoro), 30.IV.1872, *Marcucci & Sommier s.n.* (FI); Monte S. Lucia (Sassari), IV.1872, *Martelli s.n.* (FI); Tempio Pausania (Sassari), 15.IV.1882, *Reverchon s.n.* (FI); Capo Carbonara (Cagliari), 6.III.1885, *Forsith-Mayor s.n.* (FI); Gennargentu (Nuoro), 9.III.1890, *Vaccari s.n.* (FI); Isola della Maddalena (Sassari), 10.IV.1893, *Vaccari s.n.* (FI); Cagliari, 4.IV.1894, *Martelli s.n.* (FI); Monte Limbara (Sassari), 14.III.1912, *Fiori s.n.* (FI); Porto Torres (Sassari), 20.III.1912, *Fiori s.n.* (FI); Campeda (Sassari), 28.III.1912, *Fiori s.n.* (FI); Torre Grande (Oristano), 19.III.1912, *Fiori s.n.* (FI); Giara di Gesturi (Nuoro), 1.V.1976, *Valsecchi & Diana s.n.* (SS); Monte Novo S. Giovanni, Orgosolo (Nuoro), 22.IV.1977, *Corrias & Diana s.n.* (SS); Cantoniera Ortuabis, Aritzo (Nuoro), 23.V.1979, *Corrias, Diana & Camarda s.n.* (CAG); Laconi (Nuoro), 30.IV.1979, *Corrias & Diana s.n.* (SS); Isola La Maddalena (Sassari), 25.III.1980, *Corrias & Diana s.n.* (SS); Arzachena (Sassari), 15.III.1981, *Corrias & Diana s.n.* (SS); Castelsardo (Sassari), 23.III.1982, *Arrigoni & Corrias s.n.* (SS); Altopiano di Campeda (Nuoro), 22.III.1982, *Arrigoni & Corrias s.n.* (SS); Vallicciola, Monte Limbara (Sassari), 10.IV.1983, *Villa s.n.* (SS); Putzu Idu (Oristano), 27.III.1983, *Bazzani s.n.* (SS); Isola Su Cardulinu, Domus De Maria (Cagliari), 13.II.1986, *Bocchieri s.n.* (CAG); Stagno Cirdu, Isola di S. Antioco (Cagliari), 15.II.1991, *Mossa s.n.* (CAG); Capo Caccia (Alghero), 10.IV.2002, *Scoppola s.n.* (UTV); Monte Arcuentu, Arbus (Cagliari), 20.I.2003, *Bacchetta, Pontecorvo & Vacca s.n.* (CAG); Campu Mannu, Monte Cardiga (Cagliari), 3.IV.2005, *Iiriti s.n.* (CAG); Punta Molentis, Villasimius (Cagliari), 9.III.2006, *Frignani & Iiriti s.n.* (CAG); Punta S. Giusta, Castiadas (Cagliari), 18.III.2006, *Iiriti s.n.* (CAG); Altopiano di Teccu, Barisardo (Nuoro), 16.II.2007, *Iiriti s.n.* (CAG). **Continental Italy. Tuscany:** Castiglioncello (Livorno), 5.IV.1928, *Chiarugi s.n.* (FI).