

## STERNBERGIA COLCHICIFLORA (AMARYLLIDACEAE), A NEW RECORD FOR THE FLORA OF IRAN

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*Sternbergia colchiciflora* (Amaryllidaceae) is recorded for the flora of Iran from Kurdistan province (West Iran). The species has been collected from rocky oak forests around Bandol Village in Marivan. The geographical distribution of the new record and its distinguishing characters are discussed.

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**Key words:** New record; *Sternbergia*; Amaryllidaceae; Kurdistan; Iran

گونه *Sternbergia colchiciflora* از تیره نرگسیان، گزارشی جدید برای فلور ایران  
آزاد رستگار: استادیار پژوهش، بخش تحقیقات جنگلها و مراتع، مرکز تحقیقات و آموزش کشاورزی و منابع طبیعی استان کردستان،  
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گونه *Sternbergia colchiciflora* از تیره نرگسیان برای اولین بار برای فلور ایران از استان کردستان گزارش می‌شود. این گونه از  
جنگلهای بلوط صخره‌ای اطراف روستای بندول در مریوان جمع‌آوری شده است. پراکنندگی جغرافیایی گزارش جدید و صفات شاخص  
آن شرح داده می‌شود.

### INTRODUCTION

*Sternbergia* Waldst. & Kit. with 8 species, is one of the smallest genera in Amaryllidaceae (WCSP 2013), named for K. Sternberg (1761-1838). Phylogenetic approaches considered *Narcissus* L. as the brother genus for *Sternbergia* (Gage & Wilkin 2008, Gage & al. 2011). Taxonomic complexity were reported for some taxa like *S. sicula*, and *S. lutea* based on morphological, caryological, and molecular evidences (Boissier 1884, Halacsy 1904, Rechinger 1943,

Feinbrun & Stearn 1958, Polunin & Huxley 1965, Webb 1980, Mathew 1984, Kamari & Artelari 1990, Tanker & al. 1996, Yuzbasoglu & al. 1997, Pasche & Kerndorff 2002, Peruzzi & al. 2008, Gage & Wilkin 2008, Gage & al. 2011).

The Mediterranean, Irano-Anatolian, and Central Asian regions are the main distribution areas of the genus (Mathew 1983, Youssef & al. 2017). Turkey with 7 species is the richest country for the genus (Gage & al. 2011).

According the Flora Iranica, 3 species of the genus including *S. fischeriana* (Herb.) Roem. *S. lutea* (L.) Ker Gawl. ex Spreng., and *S. clusiana* Ker Gawl. ex Spreng. are growing naturally in the Iranian plateau and in the Flora of Iran as well (Wendelbo 1970). Although Wendelbo treated *S. fischeriana* as a distinct species but about two decades later, it was treated as a synonym of *S. vernalis* by Mathew (1984).

Morphological and phytogeographical characteristics of *Sternbergia colchiciflora* Waldst. & Kit. are presented here.

## MATERIALS & METHOD

The plant materials were collected from Bendol Mountain, prepared as herbarium specimens. The materials were identified using Flora Iranica, Flora of Iran, Flora of Iraq, Flora of the USSR, Flora Europaea and Flora of Turkey. The specimens are deposited in the HKS herbarium. The plant materials were examined and compared with the type photos at W, E, K, BM, G, P, HUH, S, and SAV (herbarium acronyms follow Thiers 2019). Distribution map of the new record was drawn in ArcMap ver. 10.6.1.

## RESULTS AND DISSCUSSION

*Sternbergia colchiciflora* Waldst. & Kit., Descr. Icon. PL. Hung. 2: 172, t. 159 (1803-1804). Fig. 1.

**Specimens examined:** Kurdistan, Marivan, Bendol, 1500-2100 m a. s. l., 24.10.2018, Ghaderi (14192 HKS); Kurdistan, Marivan, Bendol, 2000 m a.s.l., 24.5.2019, Ghaderi (14270 HKS)

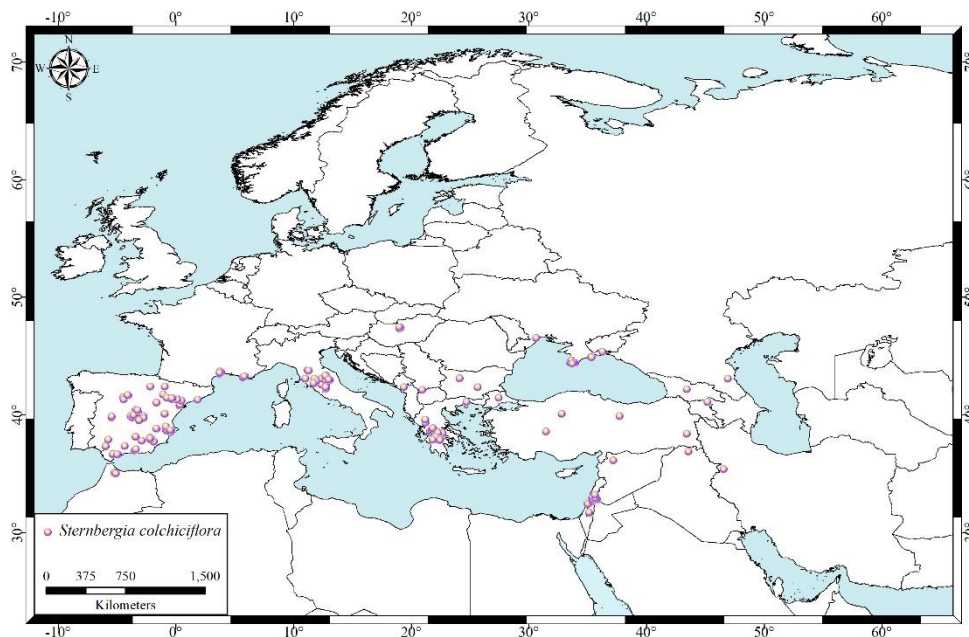
Perennial, 5-12 cm tall; bulb spherical-ovoid to oblong-ovaloid, 5-15 mm diam., enveloped in brown coats; leaves linear, 4-5 mm broad and up to 15 cm long, narrowed toward base, obtuse; almost twisted or spiral, appearing in spring; flowering in fall; scape short, scarcely raised above soil level, with a short sheath; spathe as long as the tube of the sulfur-yellow perianth; perianth segments as long as or slightly longer than the tube, the outers acuminate, the inners obtuse; perianth tube 1.8-2.7 cm; segments narrowly oblanceolate, 2.3-3.3 × 0.2-0.5 cm. Filaments ca. 4-8 mm. Seeds strophiolate.

**Distribution:** S Europe, N Africa, Caucasus, Russia, Palestine, Syria, Iraq, Iran. Map (1).

The present discovery of the species from Bendol Mountain, expands the distribution range of this species into adjacent Kurdistan of Iran. The Iranian plants fit perfectly with the descriptions and images given in all references.

**Habitat:** The observed population had more than 50 flowered individuals in an area of about 100 m<sup>2</sup>, in an open, calcareous, and rocky habitat dominated by oak trees.

**Flowering time:** September to November; the flowering period ranges approximately from 2 to 10 days.



Map 1. Distribution map of *S. colchiciflora* in the world.

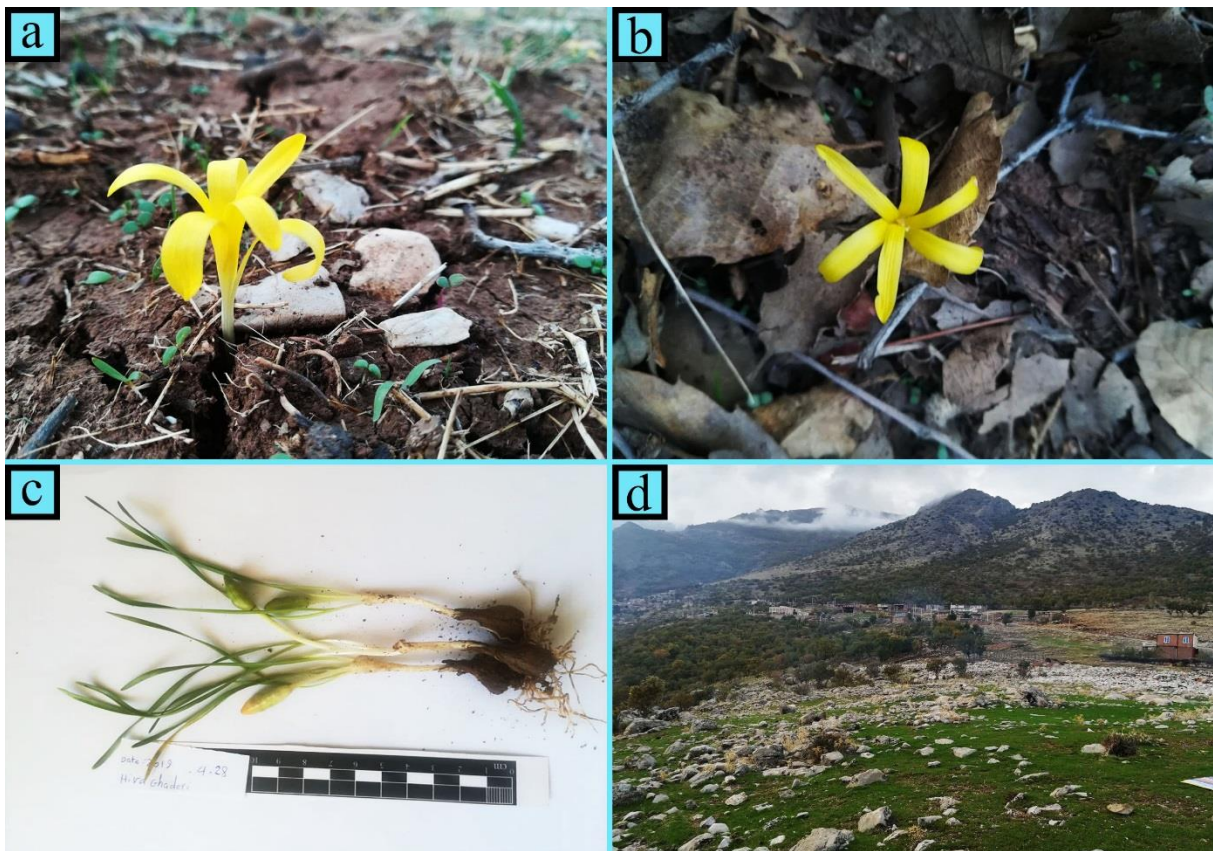


Fig. 1. *Sternbergia colchiciflora*. a-b, perianth; c, the plant with bulb, leaves and flower bud; d, rocky oak forest, habitat of the new record.

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