



## *Scrophularia lucidaifolia* (Scrophulariaceae), a new species from Turkey

M. ERKAN UZUNHİSARCIKLİ<sup>1\*</sup>, EBRU DOĞAN GÜNER<sup>2</sup>, FUNDA ÖZBEK<sup>1</sup> & BİLGEHAN BİLGİLİ<sup>3</sup>

<sup>1</sup>Gazi University, Faculty of Science, Department of Biology, 06500, Teknikokullar, Ankara, Turkey; e-mail: merkan@gazi.edu.tr

<sup>2</sup>Gazi University, Health Services Vocational School, Gölbaşı, Ankara, Turkey

<sup>3</sup>Kastamonu University, Faculty of Forestry, 37200, Kastamonu, Turkey

\*author for correspondence: merkan@gazi.edu.tr

The genus *Scrophularia* Linnaeus (1753: 619) (Scrophulariaceae) is represented by approximately 270 taxa (species and subspecies) worldwide (Olivencia 2009). It is restricted primarily to the North Temperate Zone (Carlson 1968). The primary centre of diversity of *Scrophularia* is located in the Irano-Turanian region. The Mediterranean region is also an important area of diversity and for the endemism rate of *Scrophularia* (Scheunert & Heubl 2014).

*Scrophularia* includes 75 species and subspecies in Turkey (Lall & Mill 1978, Davis 1988). After publishing the 11<sup>th</sup> volume of Flora of Turkey, *S. gracilis* Blakelock (1949: 531) has been included as a new record by Dönmez (2010). *Scrophularia fatmae* Kandemir & İlhan (2014: 11) was recently published as a new species.

During a field trip in May 2014, some interesting *Scrophularia* specimens were collected from the Mersin province of Southern Anatolia. Our detailed macro and micro morphological studies have led to the conclusion that the *Scrophularia* specimens collected from Mersin differ from all other *Scrophularia* species in morphological characteristics. In this study, these specimens are described as a new species.

### Materials and Methods

Collected specimens were compared with types and other representative collections present at HUB, ANK, GAZI, LINN, OXF herbaria, and the specimens which were collected for revisional study of *Scrophularia*. Relevant literature (Gorshkova 1955, Feinbrun-Dothan 1978, Grau 1981, Meikle 1985) was also checked. The study material of *S. canina* subsp. *bicolor* and *S. lucida* was collected during field trips all over Turkey.

Seeds were examined with stereomicroscope and scanning electron microscope. Macromorphological observations were done using a Leica EZ4D stereomicroscope. At least 20 mature seeds were measured in order to determine the average sizes. For SEM, the mature seeds were placed on stubs and then coated with gold. They were examined and photographed with a JEOL JSM 6060 scanning electron microscope. The terminology of Juan *et al.* (1997, 2000) and Pinar *et al.* (2009) was used for seed characteristics.

### Description of the new species

#### *Scrophularia lucidaifolia* Uzunh. & E. Doğan *sp. nov.* (Figs. 1–2).

*Scrophularia lucidaifolia* is related to *S. canina* subsp. *bicolor*. It differs from *S. canina* subsp. *bicolor* in glandular stem (not ± glabrous); calyx lobes densely glandular (not glabrous); staminode obovate or orbicular, smaller than upper lip (not oblong-lanceolate to narrowly oblong); stamens exserted to 1.5–2× length of corolla (not exserted to 1.5–2× length of corolla).

**Type:**—TURKEY. C5 Mersin: Gözne, Işıktepe-çukurkeşli, stony slopes, 612 m, 7 May 2014, E. Uzunhisarcıklı 2501 & E.D. Güner (holotype GAZI; isotypes ANK, HUB).

Perennial. Stem erect, terete, 50–110 cm, 5–7 mm diam., glandular hairy, lower part green or purplish, branched. All

**Taxonomic relationships:**—*Scrophularia lucidaifolia* is related to *S. canina* Linnaeus (1753: 621) subsp. *bicolor* (Sibthorp & Smith 1809: 437) Greuter in Greuter & Rechinger (1967: 109) in general habit and to *S. lucida* Linnaeus (1759: 1114) in features of lower leaves. However, the new species is quite different from the others by features including indumentum, calyx, corolla, and staminode. Çukurkeşli (Gözne-Mersin) is a valley isolated by the Taurus Mountains in the East Mediterranean region and is the type locality for the new species. We found only *S. lucidaifolia* and no other congeneric species in this locality. On the contrary, *Scrophularia canina* subsp. *bicolor* and *S. lucida* show broad distribution all over Turkey.

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