Scrophularia lucidaifolia (Scrophulariaceae), a new species from Turkey

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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 (Carlomb 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 11th 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 Pınar 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, İşıktepe-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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References


