



## *Muscari erdalii* (Asparagaceae, Scilloideae), a new species from Southern Turkey

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### Abstract

*Muscari erdalii* is described as a new species from Mersin, Southern Turkey. A description, photographs and identification key to the subgenus *Leopoldia* for Turkish species are given. The morphological differences between the new species and related taxa (*M. tenuiflorum* Tausch, *M. babachii* Eker & Koyuncu) are also presented. Also the karyomorphology of *M. erdalii*, *M. tenuiflorum* and *M. babachii* is presented and discussed. The chromosome number of the new species is  $2n = 18$ .

**Key words:** *Muscari*, *Leopoldia*, Mersin, taxonomy, Turkey

### Introduction

The genus *Muscari* Miller (1754: 926) includes nearly 61 taxa distributed in the world (WCSP, 2013) and its members mostly occur in the whole Mediterranean basin as far as the Caucasus, temperate Europe, North of Africa and South West of Asia (Jafari *et al.* 2008). It is traditionally divided into three subgenera in Flora of Turkey and the East Aegean Islands: *M.* subgen. *Muscari*, subgen. *Leopoldia* (Parlatore 1845: 440) Rouy (1910:435) and subgen. *Botryanthus* (Kunth 1843: 313) Rouy (1910: 435).

The genus *Muscari* was revised by Davis & Stuart (1984) for the ‘Flora of Turkey and the East Aegean Islands’, in which 20 species were recognized. After this study, 10 further new species have been described from Turkey (Karlen 1987, Tan 1988, Speta 1989, Cowley *et al.* 1994, Güner & Duman 1999, Yıldırımli & Selvi 2002, Uysal *et al.* 2007, Eker & Koyuncu 2008, Doğu & Bağcı 2009 and Yıldırımli 2010). Thus, the total number of species have increased to 30 in the recent twenty years. Moreover, 20 out of 30 taxa are endemic to Turkey and the endemism rate in this genus is consequently very high, about 60%. The total number of *Muscari* subgen. *Leopoldia* taxa in Turkey rises to 9 with the new species.

In March 2011, during the bulb collection expedition for the project titled “Wild Turkish Geophytes and their new cultivars”, Erdal Kaya collected around Mersin (Mut-Kırobası), together with many other bulbous species including recently described species as *Allium enginii* Özhatay & Mathew (1995: 723), some interesting *Muscari* specimens, which are here described as a new species.

### Material and methods

In March 2011 bulbs were collected and cultivated in Geophyte Garden in Yalova Research Institution. In May 2012 and May 2013 the plants flowered (Fig. 1). Hence, herbarium specimens were prepared and kept in ISTE Herbarium. During the plant identification, it resulted that it is a new representative of subgen. *Leopoldia*. It was possible to compare all the related species in the same condition, in the Geophyte Garden, in flowering and fruiting time (Fig. 2 and Table).

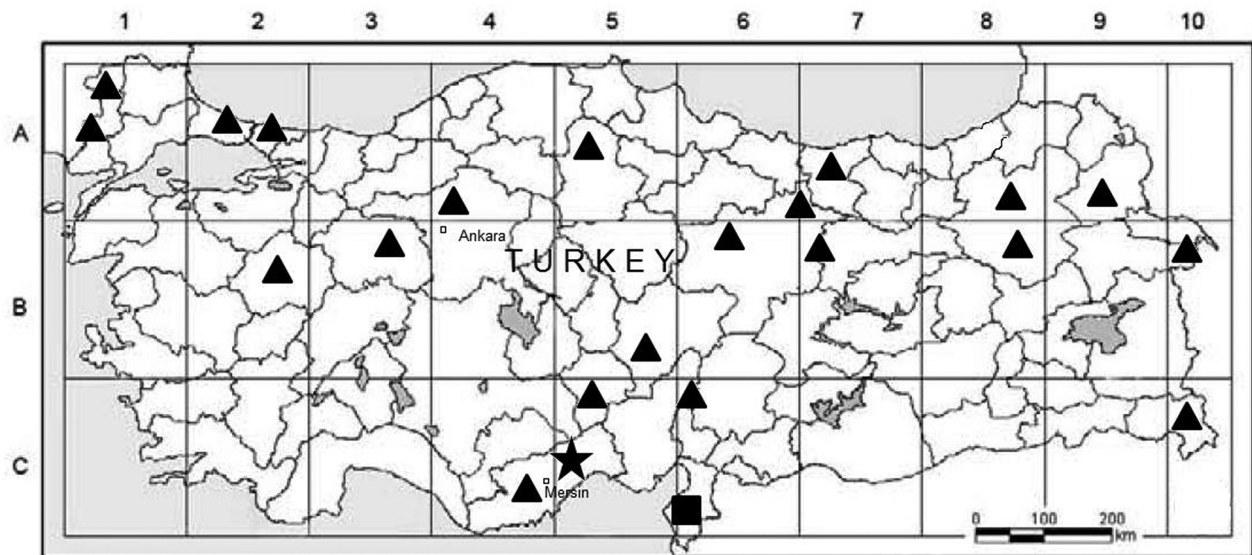


FIGURE 5. Distribution map of *M. erdalii* (stars), *M. babachii* (squares), and *M. tenuiflorum* (triangles) in Turkey.

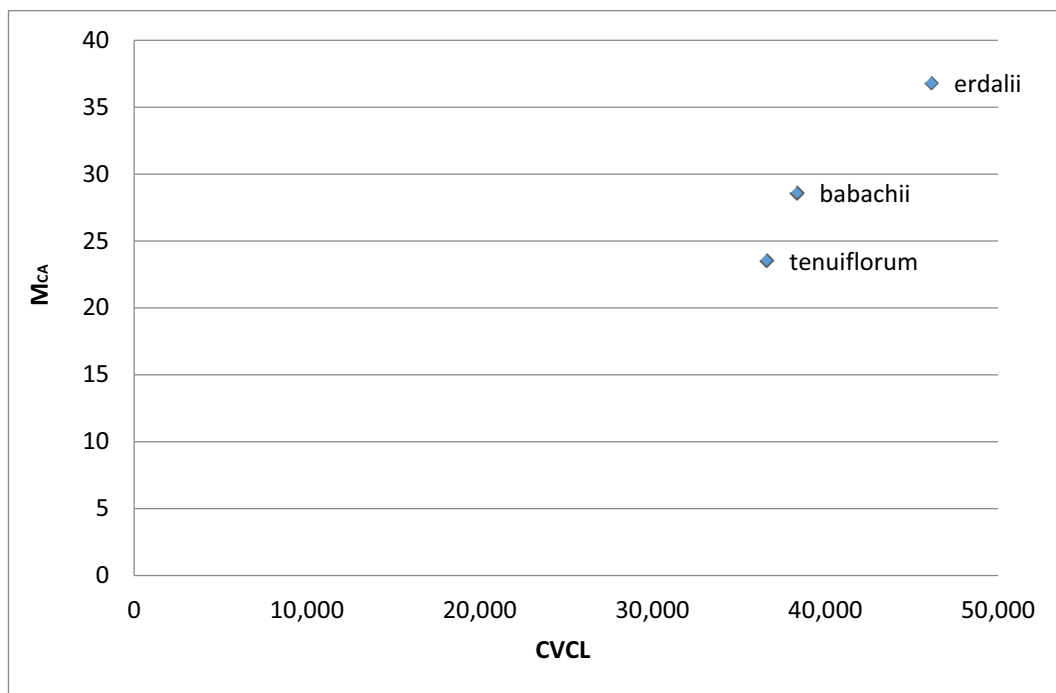


FIGURE 6. Scatter plot of the three *Muscari* karyotypes reported in Figure 4 against  $CV_{CL}$  (coefficient of variation in chromosome length) and  $M_{CA}$  (mean centromeric asymmetry).

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