

## Two Boraginaceae new to the portuguese flora

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*Dos Boraginaceae nuevas para la flora portuguesa*

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**Palavras chave.** Boraginaceae, Portugal, *Anchusa puechii*, *Alkanna tinctoria*.

In 2016, during field work, the author observed and collected two species of *Boraginaceae* previously unknown to the Portuguese vascular flora, according to Sequeira *et al.* (2011): *Anchusa puechii* Valdés and *Alkanna tinctoria* Tausch. These are the first records of these species in Portugal, and so, both species should be added to Portuguese vascular flora.



**Figure 1.** *Anchusa puechii* Valdés.

***Anchusa puechii*** Valdés (Figura 1).

Portugal, Baixo Alentejo (BAI), Beja, Entre Trigaches e Beringel. UTM 29SNC91: Prados anuais em olival tradicional de sequeiro, em barros castanhos. André Carapeto, 12-04-2016, UEVH 6951.

This plant was considered endemic to Southern Spain, with a distribution range limited to the basins of Guadalquivir and Guadiana rivers (Valdés, 2012a). This plant is now also reported in Portugal, in Baixo Alentejo province, between Trigaches and Beringel (Figure 3). Was observed in annual communities associated with ancient and traditionally managed olive groves, in brown clay basic soils.

The observed population was composed by a small number of individuals (150-200, rough estimate), sparsely dispersed in the olive groves. More recently another population was found in Portugal, near Serpa in Baixo Alentejo, occurring in similar *habitat* conditions (Pereira 2018).

The nearest known population occurs in Spain, near Lobón in Badajoz province, circa 150 km to NW (Rincón *et al.* 2008, Anthos, 2018). This plant was assessed as Vulnerable (VU), in Spanish Red List (Moreno coord. 2008). In Portugal, this plant also seems to be seriously threatened, due to the ongoing replacement of ancient olive groves by intensive olive plantations. This replacement, which causes the loss of this species habitat, is taking place in all the surrounding area of the only known location in Portugal. This serious threat was already reported in other species with similar habitat requirements (Pereira *et al.* 2014).

***Alkanna tinctoria*** (L.) Tausch (Figura 2).

Portugal, Alto Alentejo (AAI), Elvas, Monte do Pombal. UTM 29SPD50: Prado ralo sobre



Figure 2. *Alkanna tinctoria* (L.) Tausch.

substrato básico, pastoreado por ovinos. André Carapeto, 28-03-2016, UEVH 6950.

This plant occurs within a wide range across all Mediterranean basin (Valdés 1987, Valdés 2012b). This plant is now also reported in Portugal, from Alto Alentejo, south of Elvas city, near Monte do Pombal (Figure 3). It was found in thin pastures in basic soils, grazed by ovine cattle and mixed with open shrubland dominated by *Retama spherocarpa*.

Only 182 individuals were counted, dispersed in three small sites, which occupy a total area inferior to 0,06 km<sup>2</sup>. All the surveying made in nearby sites, turnout to be unsuccessful.

The nearest known populations occur in Spain, near Cerro Carija (Mérida), in Badajoz province, circa 80 km to W (Anthos 2018, GBIF 2018). Although is considered a least concern species in Spain (Valdés *et al.* 2009), in Portugal this species seems to be seriously threatened, since more than half of the only known population is likely to be destroyed by a railway development project.

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Figure 3. Location of the reported observations.

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