Reported of four new subspecies of *Ziziphora clinopodioides* (Lamiaceae) for the flora of Turkey

Received 29 December, 2016 Revised 13 February, 2017 Accepted 17 February, 2017 Published 21 March, 2017

**Mehmet Fırat**
Yüzüncü Yıl University, Faculty of Education, Department of Biology, TR-65080 Van, Turkey.

Author’s Email: kuyucak65@yahoo.com

In the current study, *Ziziphora clinopodioides* Lam. subsp. *elbursensis* (Rech.f.) Rech.f., *Ziziphora clinopodioides* Lam. subsp. *filicaulis* (Rech.f.) Rech.f., *Ziziphora clinopodioides* Lam. subsp. *kurdica* (Rech.f.) Rech.f. and *Ziziphora clinopodioides* Lam. subsp. *rigida* (Boiss.) Rech.f. four new subspecies record for the flora of Turkey, are reported and their distribution and characteristics were described. The sub specimens were collected in Van nad Hakkâri province from eastern Anatolia. Where the sub specimen of the *Ziziphora clinopodioides* Lam. are morphological description, photographs and distribution map of the new record are presented.

**Key words:** Lamiaceae, *Ziziphora clinopodioides*, four new records, Van, Hakkâri, Turkey

**INTRODUCTION**


**MATERIALS AND METHODS**

During floristic surveys in Van and Hakkâri province (Figure 1), in 2011, 2012, 2013 and 2016, specimens were collected of one unidentified subspecies from *Z. clinopodioides* Lam., therefore we decided to analyze the morphological characters of the species. Then collected some other specimens and examined them by using a wide range of literature about this species for identification (e.g. (Jalas & Rechinger 1982). As a result of (this, erase) efforts and with the light of characters observed, four new records for the flora of Turkey, are described.

Images of the living material were taken with a Sony DSCR1 digital camera. Geographical positions were identified using a Magellan eXplorist 710 GPS. According to the grid system (Davis 1965) these new sub species, which
are present in Van and Hakkâri district, falls specifically within the B9, C9 square (Figure 1). A total of 10 herbarium specimens of the new species were collected from three adjacent localities and deposited in the University herbaria and (in the; erase) personal herbarium of the author (Herb. Firat).

RESULTS

**Ziziphora clinopodioides** Lam. (Figure 2-5)

**Description:**—Suffruticose, often mat-forming perennial. Stems prostrate to erect, much branched from base, to 50 cm, glabrous or ± hirsute. Leaves very variable size and shape, linear-lanceolate to ovate-oblong, rarely suborbicular, glabrous to ± pilose or velutinous. Bracts usually broader than leaves, sessile. Inflorescence a dense terminal head. Calyx 3.5–7 mm, glabrous to densely hirsute, frequently purplish in high-altitude forms. Corolla tube included in calyx (females: or shortly exerted (hermaphrodites). Corolla mauve to pale lilac (rarely white). (7-)10–12 mm, tube ± included in calyx. Nutlets pale brown.

**Habitat:** Steppe and stony slopes, 1500–3300 m.

**Phenology:** Flowering from June to September

**Distribution:** Caucasia, N. Iraq, Iran (except S.), Afghanistan, C. Asia.

**Specimens examined**

*Z. clinopodioides* Lam. subsp. *elbursensis* (Rech.f.) Rech.f.=TURKEY. B9 Van: Nebirnas plateau, steppe, 2900 m, 37°54′44″ N, 43°43′10″ E, coll. 27 August 2012, M. Firat 28914 (Herb. M. Firat).

*Z. clinopodioides* Lam. subsp. *filicaulis* (Rech.f.) Rech.f.=TURKEY. C9 Hakkâri: Kandil plateau, steppe, 2956 m, 37°37′56″ N, 43°57′05″ E, coll. 21 July 2011, M. Firat 27775 (Herb. M. Firat).


*Z. clinopodioides* Lam. subsp. *rigida* (Boiss.) Rech.f.=TURKEY. B9 Van: from Hoşap to Karadağ, steppe, 2100 m, 30 July 2012, M. Firat 28862 (Herb. M.
Figure 2: Ziziphora clinopodioides subsp. elbursensis; A. habit, B. flowers
Figure 3: *Ziziphora clinopodioides* subsp. *filicaulis* A. habit, B. flowers
Figure 4: *Ziziphus clinopodioides* subsp. *kurdica* A. habit, B-C. flowers, D. calyx, E. corolla
**Figure 5**: *Ziziphora clinopodioides* subsp. *rigida* A. habit, B flowers

REFERENCES


