A REVISION OF THE GENERA BIDENS AND ECLIPTA (ASTERACEAE) IN IRAN

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A revision of the genera Bidens L. and Eclipta L. in Iran is presented. Bidens bipinnata is recorded to Iran as a new report. Key to the species is given and selected specimens were studied are listed.

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Key words. Bidens, Eclipta, Asteraceae, new record, Taxonomy, Iran.

Introduction

The genera Bidens L. and Eclipta L. in Iran were revised to prepare the draft of Flora of Iran. These genera belong to the tribe Heliantheae and Asteraceae Family. Bidens includes over 200 species in tropical and subtropical regions. In this research more to the formerly known Bidens tripartita, B. bipinnata is presented as a new record for the flora of Iran (Rechinger 1989)

Eclipta includes about four species in tropical and subtropical regions. According to Flora Iranica (Rechinger 1989) there are two species of Eclipta in the different regions of Iran, Eclipta alba is limited to Gorgan, but based on the recent work this locality seems to be wrong.

The aim of this paper is to give additional information on the genera Bidens and Eclipta in Iran comparing to former reference (Rechinger 1989).

Materials and Methods

All specimens existed in different herbaria of Iran including TARI, IRAN, FUMH, Herbarium of Research Centre of Agricultural and Natural Resources of Fars province were revised. Stereomicroscopy was used for observation of morphological and micro morphological character. Different Floras were used for the identification of the taxa (Boissier 1875, Parsa 1949, Davis 1975, Rechinger 1989, Schishkin 1990).

Results

Bidens L.

The members of the genus Bidens generally grows in variety of sites such as marshes, wet meadows, along bank of rivers, streams, gardens and irrigated fields. The genus distributes in north, north west, west, centre and north east of Iran and also in Iraq, Turkmenistan, Afghanistan, Europe, northern Africa, Caucasus and North America.
Fig. 1: *Bidens bipinnata*. 
Fig. 2: Involucres and achenes. A: Bidens bipinnata. B: B. tripartita.
Key to the species of Bidens in Iran
1a. Leaves usually 3-parted, rarely 5-parted or undivided, coarsely serrate. Capitula wider than long. Outer involucral bracts usually leaf-like and longer than inner ones
   1. B. tripartita
1b. Leaves pinnate, entire or coarsely toothed. Capitula longer than wide. Outer involucral bracts shorter than inner ones
   2. B. bipinnata

Bidens bipinnata L. (Fig.1, and 2A)
Azerbaijan: Arasbaran Protected Area, between Touali & Pesianlou, 350 m, Hamzeh’ee & Asri 81362. Annual. Stem usually branched above, angular and glabrous. Leaves opposite, thin, petiolate, triangular-ovate, pinnate, entire or coarsely toothed. Capitula longer than wide, outer involucral bracts linear-lanceolate shorter than inner linear ones. Achenes dark-brown, glabrous, linear-tetragonate, 9-13 mm long, sparsely tuberculate, awns 3 or (-4) at apex, straw-yellow and 2-3 mm long, outer achenes shorter and thicker than internal ones.

Eclipta L.
The species of Eclipta generally grow in variety of sites such as marshes, wet habitats and rice field. The genus distributes in north, west, centre, south and south-east of Iran and also in Afghanistan, Talysh, Europe, Palestine, Caucasus, Turkey, India and Pakistan.

Key to the species of Eclipta
1a. Achenes smooth, without tubercles or sometimes with a few indistinct tubercles, marginate at margin
   1. E. prostrata
   2. E. alba

Eclipta alba (L.) Hassk.
Gilan Astane-Ashrafiyeh, -10 m, Zehzad, Nourian, Pakravan and Taheri 67222. -Hormozgan: Bandar Abbas, ca 50 km NE of Senderk to Araghan (EQ3), 1100-1600 m, Mozaffarian 4419; 35 km from Sanderk to Araghan, Deh-e Ziaraton (EQ3), 1000 m, Mozaffarian 44516; Minab, 29 m, Mozaffarian 63685; Minab, 29 m, Mozaffarian, Banihashemi and Shahinzadeh 44175; Minab, Roudan, Gharieh-Bika, Mazaheri and Farahbakhsh 9863-IRAN -Khorasan: Ahvaz, Darkhoein, ca 20 m, Mozaffarian 72261; -Baluchestan: 25 km from Iranshahr to Khash, 950 m, Mozaffariat 53375; Saravan, Zangivan, Vakhoiouri 9861-IRAN; Ziaratgar toward Sarbaz, Iranshahr and Ershad 9862-IRAN.

References