

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.

مروری بر جنس‌های *Bidens* و *Eclipta* در ایران

عفت جعفری، مربی پژوهشی مرکز تحقیقات کشاورزی و منابع طبیعی استان فارس.

دکتر غلامعباس قنبریان، استادیار بخش مناطق بیابانی دانشگاه شیراز.

جنس‌های *Bidens* و *Eclipta* در ایران مطالعه گردیده و نتایج حاصله شامل کلید شناسایی، سوابق تحقیق، گزارش گونه جدید برای ایران و گزارش لیست جدید رویشگاه‌ها ارایه می‌گردد. گونه *Bidens bipinnata* از تیره کاسنی به عنوان یک گونه جدید برای فلور ایران گزارش می‌گردد. رویشگاه دقیقی این گونه نیز بر اساس محل جمع‌آوری نمونه‌های هرباریومی ارایه شده است. گیاه *Eclipta alba* که در فلورا ایرانیکا تنها از منطقه گرگان گزارش شده بود مورد بررسی قرار گرفت و مشخص گردید نویسنده فلور ایرانیکا یک شماره هرباریومی و یک رویشگاه را برای دوگونه *E. alba* و *Eclipta prostrata* از گرگان گزارش داده است که این بیانگر اشتباه نویسنده فلور ایرانیکا است. در این مطالعه رویشگاه‌های جدیدی برای این گونه از ایران معرفی می‌گردد.

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*.

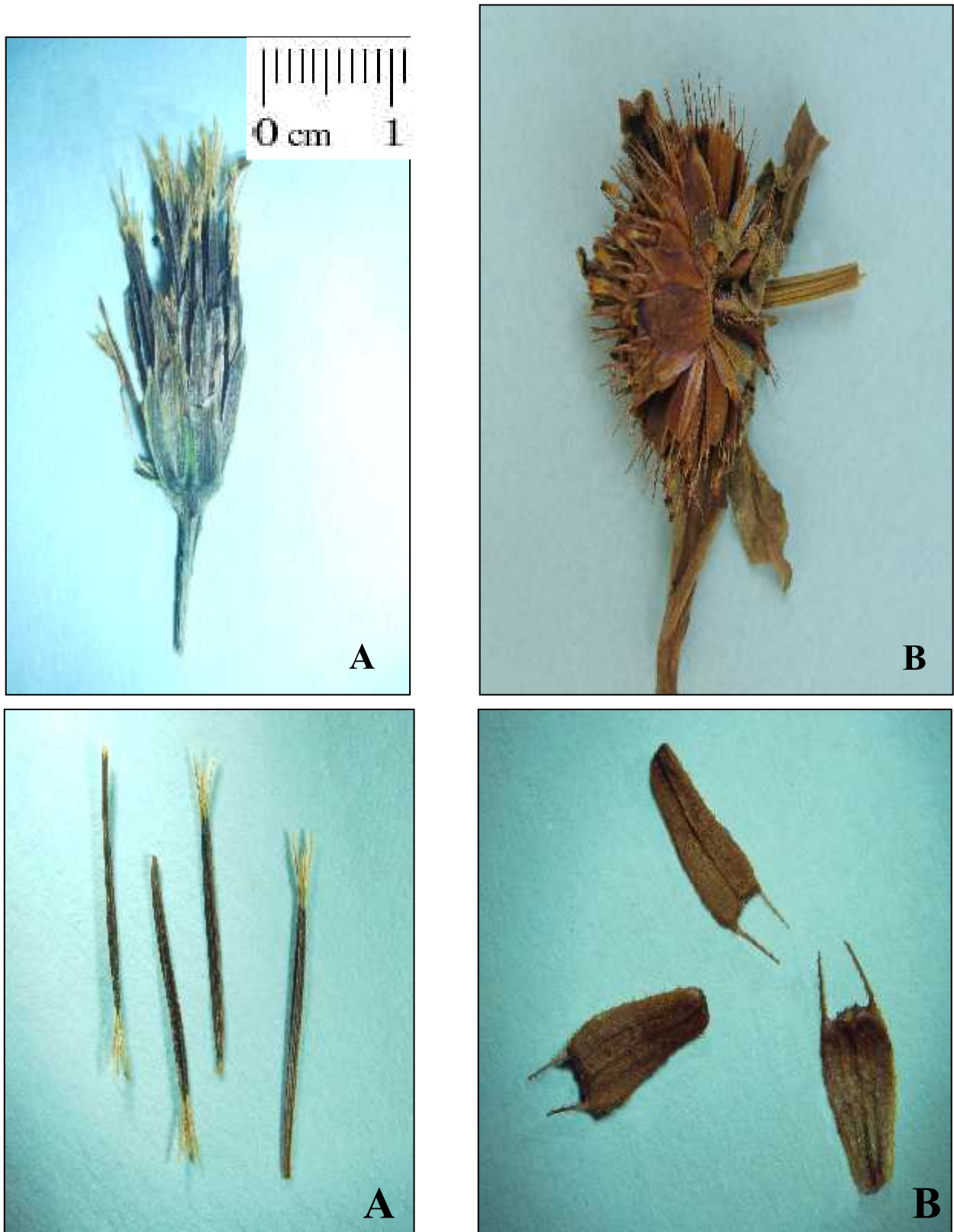


Fig. 2: Involucre and achenes. A: *Bidens bipinnata*. B: *B. tripartita*.

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 involucre bracts usually leaf- like and longer than inner ones

1. B. tripartita

1b. Leaves pinnate, entire or coarsely toothed. Capitula longer than wide. Outer involucre 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 involucre 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.

This species is compared with *B. tripartita* the formerly known species to Iran in Fig. 2.

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

b. Achenes tuberculate, without margin **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 Araghin (EQ3), 1100-1600 m, Mozaffarian 44619; 35 km from Senderk to Araghin, 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. -Khuzestan: Ahvaz, Darkhoein, ca 20 m, Mozaffarian 72261. - Baluchestan: 25 km from Iranshahr to Khash, 950 m, Mozaffarian 53375; Saravan, Zangivan, Vakhohouri 9861- IRAN; Ziaratgah toward Sarbaz, Iranshahr and Ershad 9862- IRAN.

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