Amaranthus blitum L.(Amaranthaceae): A New Record for Haryana, India

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Abstract:

Amaranthus blitum L. a member of family Amaranthaceae has been added during the present study as a new record to the flora of Haryana State, India. The species is collected during the field survey and critically examined under stereo zoom dissecting microscope to record the morphological characters as well as variations available within the species; photographs of this species and field notes were also considered for this purpose. New records are the species which were not recorded by previous workers from the same region but present study explores that species.

Keywords:*Amaranthus blitum L.*, Amaranthaceae, New record, Haryana, India.
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Introduction:

Amaranthus is a genus of angiospermic plants family Amaranthaceae. All members of family are herbs or undershrubs. Leaves are opposite, usually simple, entire or shallowly serrate-dentate, without stipules. Flowers are small, solitary, axillary or in spikes, racemes, panicles, heads or clusters, supported by scarious bracts and a pair of bracteoles, actinomorphic, bisexual or unisexual. Tepals are 3-5, equal to subequal, imbricate, scarious, deciduous. Stamens are 1-5 to many, opposite tepals, alternating with pseudostaminodes. Filaments are usually connate below, anthers are 1-2-celled. Carpels are 2-3, syncarpous, ovary superior, 1-celled, ovules are1-many, placentas basal, styles are 1-3, stigma 1-4, capitate or 2-3 branched. Fruit is usually a capsule, berry or In frequently an urticle, dehiscing circumcissilely or bursting irregulary. Seeds are 1-many.

Methodology:

Extensive surveys of entire area in different seasons (Summer, Rainy, Winter, Spring) were carried out to complete this taxonomic work for 5 years. Three collection surveys were carried out in each season in order to explored entire area randomly during a year. Attempts were made to cover all the area for collection of plants in flowering and/or fruiting stages following standard procedures (Jain & Rao, 1977). Geographical coordinates for the location of plants species were also recorded for each species by using Global positioning system (GPS). The species is collected during the field survey and critically examined under stereo zoom dissecting microscope to record the morphological characters as well as variations available within the species; photographs of this species and field notes were also considered for this purpose. New records are the species which were not recorded by previous workers from the same region but present study explores that species.

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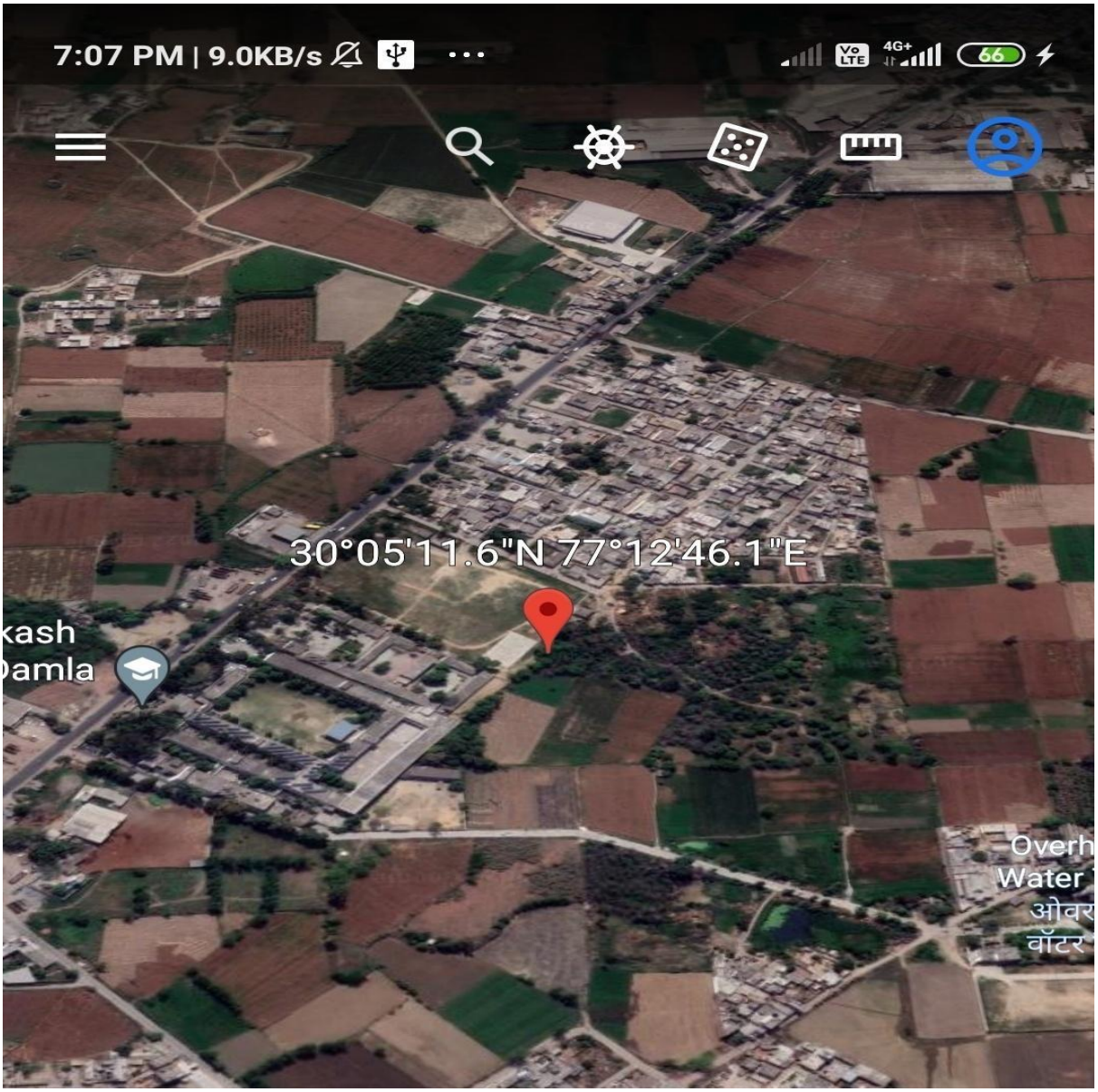

Figure 1: Google earth satellite image showing exact location of new records along withgeo-coordinates.

Identification of voucher specimens:

The identification of collected specimens was done by consulting different floras and important taxonomic works (Hooker, 1872–1897; Duthie, 1903–1915; Collett, 1902; Brandis, 1906; Bamber, 1916; Parker, 1918; Kanjilal, 1928; Sabnis, 1940-41: Bor.1960; Maheshwari, 1963; Raizada 1976; Nair, 1978; Jain, 2000). The field notes regarding the particular specimens were also consulted for this purpose. The identity specimens was further confirmed by comparing these with authenticated specimens housed at different herbaria such as Botanical Survey of India, Dehra Dun (BSI), Forest Research Institute, Dehra Dun (FRI), Botanical Survey of India, Kolkata (BSI), and National Botanical Research Institure, Lucknow (NBRI).

Results and Discussion:

Amaranthus blitum L. a member of family Amaranthaceae has been added during the present study as a new record to the flora of Haryana State, India. The species is collected during the field survey and critically examined under stereo zoom dissecting microscope to record the morphological characters as well as variations available within the species; photographs of this species and field notes were also considered for this purpose.

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***Amaranthus blitum* Linn.,** Sp. Pl. 2: 990, 1753; Hooker, Fl. Br. Ind. IV: 721; *A. lividus* Linn. Sp. Pl. 2: 990, 1753; *A. oleraceus* Linn.Sp. Pl. (ed. 2) 2: 1403, 1763.

Assending or prostrate, erect, annual herb. Stem 10-50 cm high, slender, stout, simple or branched. Leaves 2-7 x 0.5-5 cm, ovate-rhomboid, glabrous, mucronate at the apex, long petioled. Flowers born in terminal, axillary, stout spikes or panicles, with intermixed male and female flowers. Tepals 3, membranous on margins. Capsule 1-2.5 mm long, compressed. Seeds rounded, compressed, black.

Flowering and Fruiting: February-April.

Occurrence and associations: Infrequent, near the water resources.

Parul: 314, Damla pond side.

Geocoordinates for new record:30.086556° N,77.212793° E

Altitude:273 m.

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