in Hook. f. Fl. Brit. India 2: 86, 1876; Collett Fl. Simlensis 116, 1921.

An annual herb; branching usually from base, slender, trailing, ultimately erect; leaflets obovate or obcordate, finely toothed; 0.5-1 cm long; terminal leaflet with hardly 2 mm long stalk; petiole 0.6-1 cm; stipules lanceolate 2.5-4 mm long; flower heads yellow on axillary 1.0-2.5 cm long peduncles, 0.4-0.8 mm diameter; calyx teeth very small, narrow, acute; corolla hardly 3-4 mm long; pod obovoid, one seeded; seed yellowish brown.

Harwan Park (Gurcharan Singh 378) fls., April-June.

This species is easily distinguished from other Indian species by its smaller yellow heads and annual habit. As an introduced weed it has also run wild in Nilgiri Hills (Gamble, 1918), and Simla (Collett, 1921).

**Senecia vulgaris** Linn. sp. pl. 867, 1753; Butcher New Ill. Brit. Fl. II: 436, 1961.

An annual herb; stem erect or decumbent, little branched, often rooting at lower nodes 12-25 cm high; Leaves alternate, pinnatifid, upper with auricled base, lower narrowed to a petiole; Heads in corymbs, nearly 1 cm long, 3-5 mm in diameter; Involucre bracts linear with black tips, one seriate with few outer smaller ones; Receptacle flat, naked; Heads discoid, ray absent; Achenes 2-4 mm long, ribbed, hirsute, apex truncate, pappus of soft hairs, deciduous.

Orchards around Dal lake (Gurcharan Singh 21), Harwan (Gurcharan Singh 270), fls. Nov.-May.

The species is close to *S. pedunculatus* Edgew. and *S. coronopifolius* Desf. in general habit but is distinguished by the absence of ligules and the hirsute achenes. This is another introduced weed also having runwild in gardens and roadsides in Nilgiris (*Gamble*, 1921). Predominantly a winter weed it has the distinction of being the only weed that manages to flower throughout the winter months of Kashmir Valley. It has fairly spread in cultivated gardens and orchards in and around Srinagar.

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## AN INSTANCE OF PROLIFERATION IN GRASS

Teratological phenomena are not very common in the grasses. As far as known such cases have been reported from India by Parandekar (1950), Majumdar (1954), Bor (1960), Jain (1968) and Jain and Pal (1970), in the genera *Zea* L., *Sacciolepis* Nash, *Festuca* L., *Deschampsia* P. Beauv., *Poa* L., *Eragrostis* P. Beauv., *Bromus* L., *Apluda* L., *Centotheca* Desv., *Cyrtococcum* Stapf, *Hemarthria* R. Br. and *Panicum* L.

Recently the author noticed marked proliferation in the inflorescence of a specimen of *Cymbopogon* Spreng. Fortunately there are few unproliferated normal spikelets in the specimen.

The identity of the normal spikelets shows that the species is *Cymbopogon jwarancusa* (Jones) Schult. It was collected in April 1865 from Elora, Maharashtra. It shows marked proliferation in the inflorescence and the inflorescence has an appearance of numerous plantlets borne on the branches of the racemes (Plate 1). Some spikelets (both sessile and pedicelled) show a typical proliferation and have been transformed into a sickel-shaped structure.

The normal sessile spikelet in this grass is 2-flowered and pedicelled spikelets is 1-flowered. Generally the lower floret of the sessile spikelets is neuter and the upper one is fertile. In the present case the florets of both sessile and pedicelled spikelets have been replaced by spathulate, hairy, many-nerved leafy structures which can be differentiated into a sheathy part and a flat long leaflike structure (Fig. 1). The involucral glumes of the spikelets more or less conserve their forms. The internodes

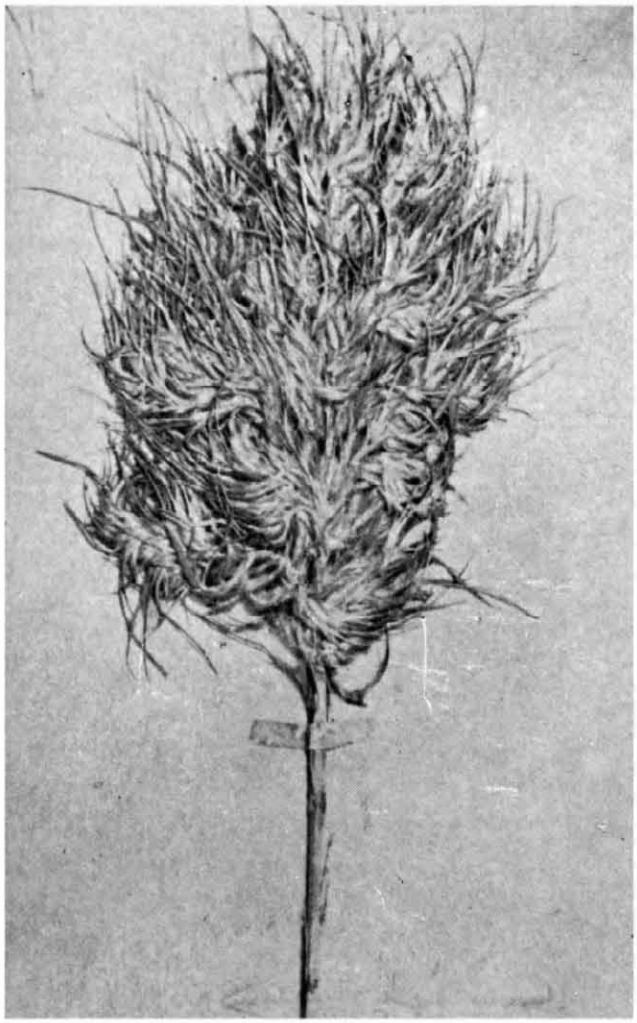

Plate 1 : Inflorescence of *Cymbopogon jwarancusa*


Fig. 1. A single spikelet of *Cymbopogon jwarancusa*

between the lowest two glumes and the lemma have elongated more than usual and have also become hairy.

It is interesting to note that the present specimen was collected in the summer and does not agree with the suggestion of Arber (1934) that proliferation is more common during September to December (*i.e.* after the rains and before the onset of winter).

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