

**EURYSOLEN PRAIN (LAMIACEAE) - A NEW GENERIC RECORD FOR INDIA**

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**A B S T R A C T**

*Eurysolen* Prain, a monotypic genus represented by *E. gracilis* Prain, is reported for the first time in India and the name is lectotypified. Affinities of the genus are discussed.

In the course of revisionary studies of the family Lamiaceae the authors came across some interesting specimens at ASSAM, CAL, and DD, identified as *Pogostemon wattii* C.B. Clarke, collected in north-eastern India. The specimens differed from the genus *Pogostemon* Desf., in corolla annulate within and the lower lip 3-lobed (in *Pogostemon* the corolla lacks the annular nature and the lower lip is entire). Subsequently, it was found that the specimens in fact represent *Eurysolen gracilis* Prain, i.e., the sole species of the genus, so far known to occur in south-eastern Asia (Myanmar, Thailand and Malesia) and south-western China (Yunan). Thus, the present report of the occurrence of *Eurysolen* forms a new generic record for the country.

***Eurysolen gracilis* Prain** in Sci. Mem. Med. Offic. Army India 9 : 44.1898 & in Ann. Roy. Bot. Gard. (Calcutta) 9 : 611. t.75.1901 ; Kudo in Mem. Fac. Sci. Agr. Taihoku Univ. 2 : 276. 1929 ; Mukherjee in Rec.Bot.Surv.India 14(1) : 227.1940 ; Keng in Gard. Bull. Singapore 24 : 77.1969 & in van Steenis, Fl. Malesiana 8(3) : 334, f. 11.1978.-*Type* : Myanmar, Kachin hills, Mar.1878, *Shaik Mokim s.n.* (Acc.No.363566) (CAL!, lecto-, chosen here); Acc.Nos.363567-71 (CAL!, isolecto-; k-n.v., isolecto-).

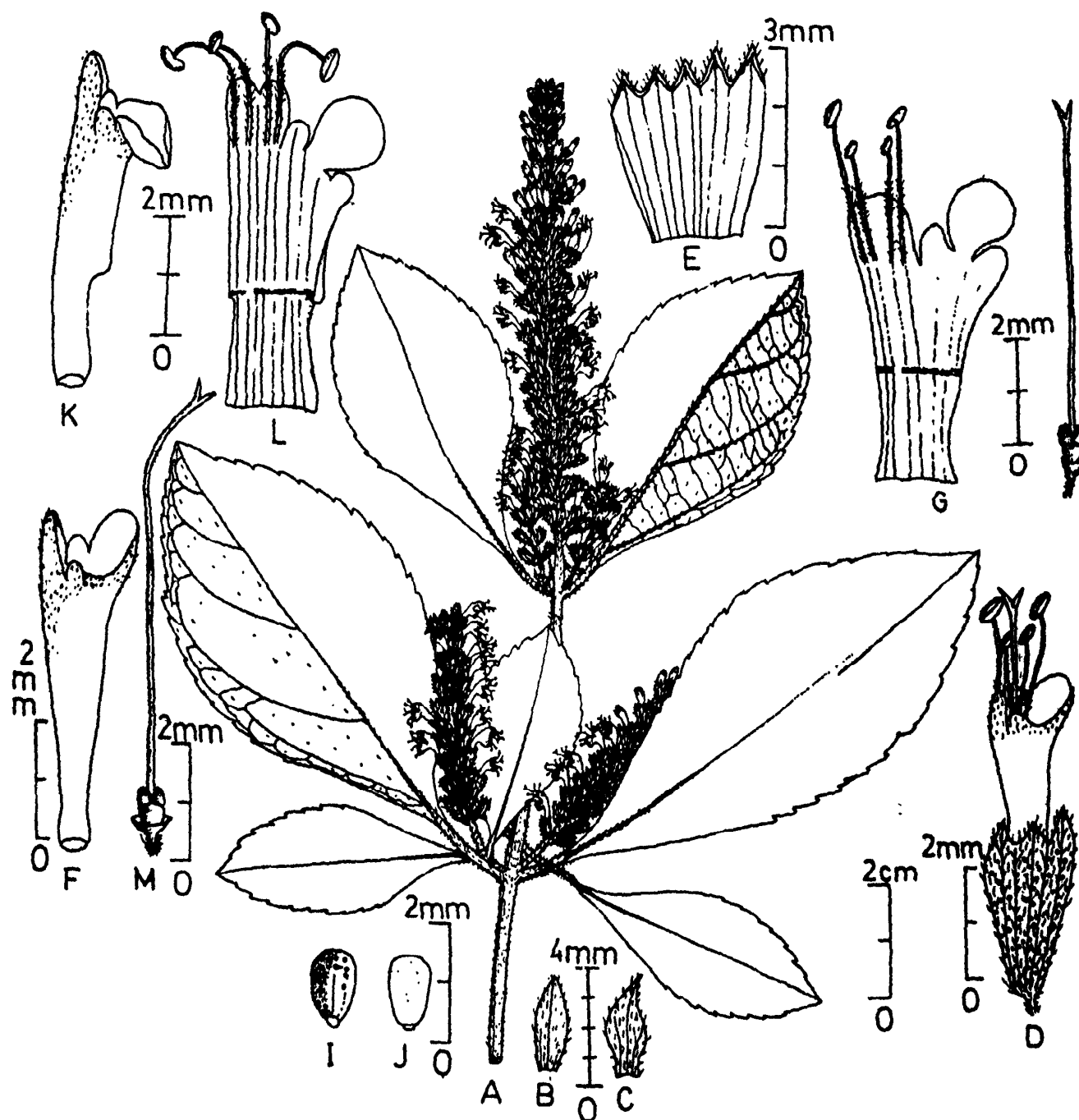
***Pogostemon wattii* auct. non C. B. Clarke 1889** : Prain in J. Asiat. Soc. Bengal, Part 2, Nat. Hist. 59 :298.1890, pro majore parte, excl. type ; Mukherjee in Rec. Bot. Surv. India 14(1) : 75.1940,

pro parte ; Deb & Dutta in J. Econ. Tax. Bot. 10 : 49.1987, pro parte.

Herb or undershrub, 30-100 cm high; stems erect with cylindric slender branches, rigid, densely adpressed tawny puberulous ; nodes slightly swollen ; internodes (2-) 4-9 cm long. Leaves opposite-decussate; lamina 3-9 (-11) by 2-3.5 cm, ovate-elliptic to rhomboid, base decurrent into petiole, acute or subacute at apex, serrate, membranous, sparsely adpressed-hirtellous; dense on nerves beneath; midrib raised beneath, impressed above; petioles 1-2(-3) cm long, slender, densely hirtellous. Inflorescence of axillary and terminal spikes, 4-8 (-15) by ca 1.5 cm; verticillasters usually few-flowered, not compact; bracts up to 4 mm long, oblong-elliptic to broadly elliptic, acute, hirtellous; pedicels up to 1 mm long, sparsely tawny hirtellous. Calyx 3-4 (-5) mm long,, tubular-campanulate, 10- or rarely 12-nerved; sparsely tawny hirtellous outside especially on nerves; teeth 5, the 3 upper teeth shorter than the 2 lower ones, triangular, acute, hirtellous outside. Corolla white, 5-6 mm long; tube exserted, annulate inside, usually gibbous below the annulus; upper lip erect, retuse or rarely entire; lower lip 3-lobed, spreading; midlobe larger than the lateral ones, rounded; lobes puberulous outside. Stamens 4, didynamous, exserted; filaments puberulous; upper ones ca 2 mm long; ones ca 3 mm long; anthers ovate-reniform, unilocular, lower ones larger. Disc uniform. Ovary substipitate; style slender, 5-7 mm long, exserted, bifid; lobes subequal,

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Figs. 1. A-M : *Eurysolen gracilis* Prain : A. habit; B-C. bracts; D. flower; E. calyx at anthesis; F-G. corolla; H. disc, ovary and style; I-J. nutlets inner and outer face; K-L. corolla; M. disc, ovary and style.  
(A-J. Watt 5079, Acc. No.354271; K-L. Watt 5079 Acc. No.354268).

acute. Nutlets 4, subequal, ca 1 mm long, obovoid, dry, glandular at the angled face, basal scar small.

*Flowering and fruiting* : December to February.

*Habitat* : Occurs on slopes, clayey soils, recorded between 750-1500 m.

*Distribution* : India (Manipur, Mizoram, Nagaland); Myanmar, Thailand, S. W. China and Malesia (Sumatra, Java and the Lesser Sunda Islands).

*Typification* : The type material of *E. gracilis* consisting of 6 specimens, 5 located at CAL and one at K (perhaps in other herbaria too) all collected by Shaik Mokim in Kachin hills (Myanmar). Of these one specimen (Acc. No.363566, CAL) bears a generic description in pencil in Prain's hand (on a paper attached to the sheet) along with an illustration of the dissected floral parts. Since the same description was subsequently published, this particular sheet is chosen here as the lectotype.

It may be interesting to note that in 1891 Prain came across two specimens (Watt 5079, 6613) collected in Manipur, NE India, identified and treated by him as *Pogostemon wattii* actually belonged to *Eurysolen*. Mukherjee (1940 : 75) also erred in following Prain and provided a description of *E. gracilis* rather than *P. wattii*. Similarly, Deb and Dutta (1987) also misidentified the specimens (Deb 30501, 30662) collected in Mizoram, NE India by comparing it with Watt's. It is thus evident that the Material of *E. gracilis* had been collected in India prior to Myanmar, but had remained wrongly determined.

Prain (1898) while establishing the genus *Eurysolen*, tentatively placed it near *Gomphostemma* Benth., in the tribe Prasieae. Briquet in a personal communication to Prain (see Prain, 1901) stated "I am very puzzled as to its place and must frankly confess that I do not dare to place it precisely in any of the tribe without knowing the ripe fruit". However, he suggested that the genus might be placed in the Prasieae or Ajugoideae. Later workers also could not settle the point due to the non-availability of mature fruiting material. Kudo (1929)

and Mukherjee (1940) placed *Eurysolen* in the Prasieae and Ajugeae (as "Ajugoideae") respectively.

Wu (1950) although placed *Eurysolen* in the Ajugeae (as "Ajugoideae"), noted an apparent relationship with *Pogostemon* Desf. Unfortunately, he did not discuss in detail. Chermersivathana (1963) was the first author who described the mature fruits as dry and with a small basal attachment scar. On this basis, he placed it with *Colebrookea* Smith, *Dysophylla* Blume, *Esholtzia* Willd., and *Pogostemon* in her subfamily Stachyoideae, which was subsequently supported by Keng (1969, 1978). Press (1982) confirmed Chermersivathana's observations (dry rather than fleshy as in Prasieae and attachment scar small and basal rather than large and lateral as in Ajugeae) and placed it in the tribe Pogostemoneae and stated, "in general habit and inflorescence *E. gracilis* resembles some species of *Pogostemon*, in floral structure resembles species of *Elsholtzia* and *Rostrinucula* Kudo and possess unilocular anthers as in *Comanthosphace* S. Moore, *Dysophylla*, *Pogostemon* and *Rostrinucula*." Recently Cantino and Harley (1991) and Cantino *et al.* (1992) suggested that the *Eurysolen* belongs to either the subfamily Pogostemonoideae or Lamioideae. Abu-Asab and Cantino (1994) after studying the pollen morphology indicated that the genus cannot be clearly assigned to any of the subfamilies as its pollen sculpturing resembles some species of *Achyrosperrum* Bl. (Lamioideae), *Ajuga* L. (Ajugoideae) and *Comanthosphace* (Pogostem-onoideae).

A noteworthy specimen to be mentioned is Watt 5079 (Acc. No.354271, CAL), which lacks the gibbous nature in corolla and upper lip entire rather than retuse. This deviating character was also noticed in Malesian example (van Steenis 11118).

*Specimens examined* : INDIA : Manipur, Kongal Thannah, 1065 m, Dec.1881, Watt 6613 (CAL); Kassome Range, 900-1215 m, Jan. 1882, Watt 5079 (CAL,DD). Mizoram, Ajal protected forest, 1065 m, 11 Jan.1963, Deb 30501 (ASSAM, CAL); Aizawl, 13 Jan.1963, Deb 30662 (ASSAM); Sator Reserve, 750 m, 5 Feb.1953, Deka s.n. (ASSAM). Nagaland, Naga

hills, sakok, 1500 m, Dec.1907, *Meebold* 7175 (CAL).  
 BURMA : Wa States, Watonsaing, 23 Dec.1936,  
*Mung Po Khant* 15233 (DD). THAILAND :  
 Chaizophum Dist., Nam Phrom, 12 Dec.1971, *van*  
*Beusekom, Geesink, Phengkhlai Wonowan* 4182 (L).  
 MALESIA : Java, Besoeki, Jang plateau east,  
 Djeloewang, 1800 m, 18-19 July 1939, *van Steenis*  
 11118 (CAL).

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