

A NEW SPECIES OF *SESAMUM* LINN. FROM NORTHERN INDIA

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## ABSTRACT

A new species of *Sesamum* by name *Sesamum mulayanum* Nair has been described with illustrations.***Sesamum mulayanum* Nair spec. nov.**

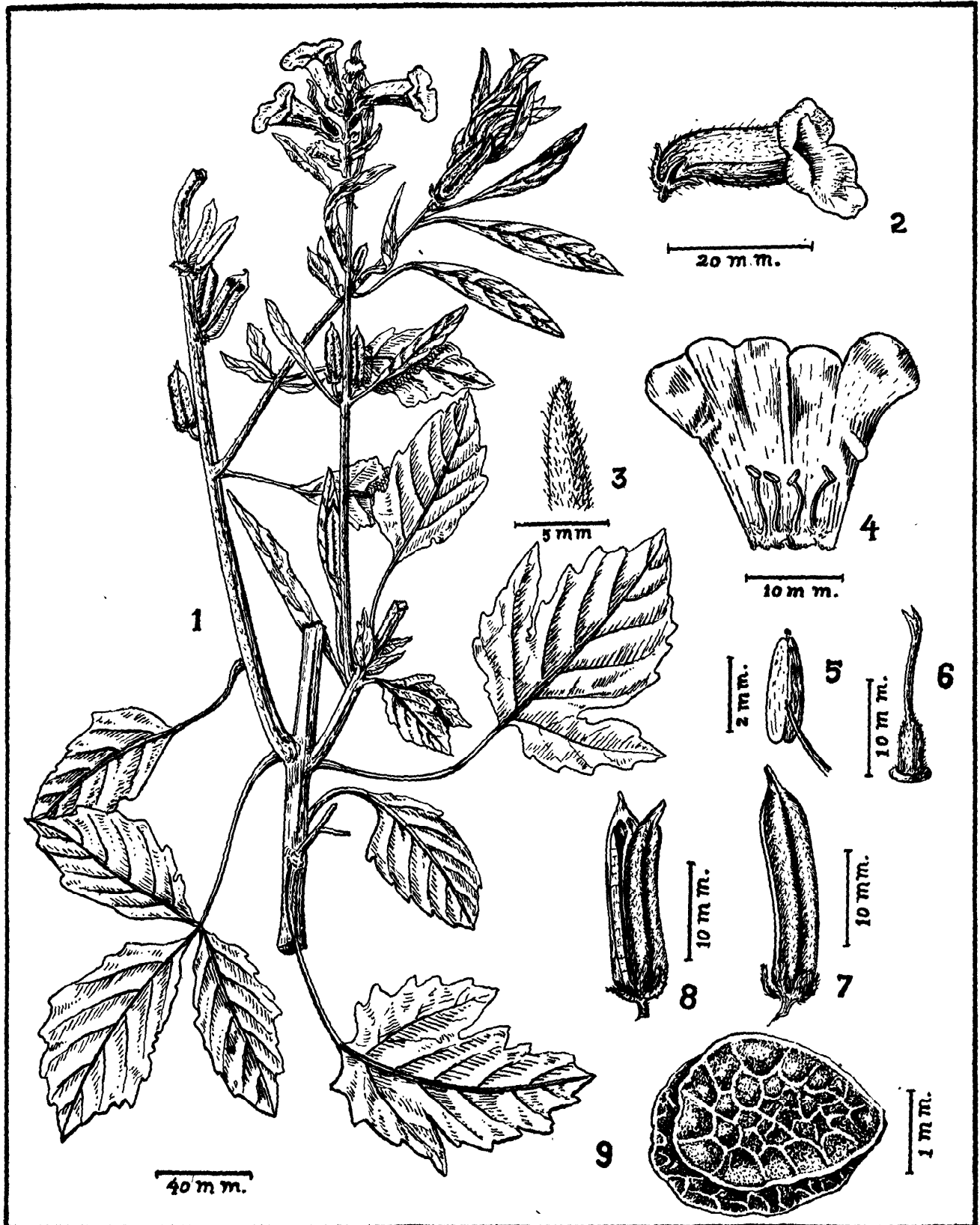
*Planta* annua, fortiter olens, 0.5–3, rarius ad 4 m. alta, saepe ramosa. *Caules* at *rami* in partibus superioribus quadrangulares lateribus sulcatis, pubescentes et tandem glabrescentes, rarius pilosi, vulgo plus minusve glandulares. *Folia* formae variae, saepe heteromorpha, opposita vel summa quidem alterna, tenuiter pubescentia ad nervos eminentes in pagina inferiore, tandem glabrescentia; inferiora vero longe petiolata, petiolis 2–12 cm. longis, vulgo palmatim 3-foliolata, 3-lobata vel 3-partita, vel etiam indivisa, ovata ex basi rotundata vel obtusa, ad apicem acuta, obtusa vel rotundata, ad margines crasse dentato-serrata; folia superiora petiolis gradatim brevioribus 0.75–2.5 cm. longis ornata, plus minusve ovato-oblongo-lanceolata vel etiam linearia ex acuta basi, integra, acuta. *Flores* solitarii in axillis foliorum superiorum; pedicelli 2–5 mm. longi glandula duplici ornati sessili in axilla bractearum, erecto-patentes. *Calyx* persistens 4–7.5 mm. longus sub fructu, incrassatus et obconicus, lobis oblongis vel lanceolatis, acutis vel sat obtusis, pubescentibus. *Corolla* 2.25–3.5 cm. longa, rosea vel rosco-alba, albido-pubescent, oblique campanulata. *Stamina* 4, epipetala, didynama; filamenta glabra, emergentia e zona miti pilorum, 6–9 mm. longa; antherae 3–3.5 mm. longae, dorsifixae, glabrae, connectivo producto et desinente in glandulam globosam; staminodia minute vel nulla. *Discus* ad basin ovarii annularis, regularis. *Ovarium* paulum compressum, 4 mm. longum, plus minusve ad apicem rotundatum, pilosum, 2-loculare sed evadens 4-loculare ob falsum septum parietale radiale, loculis singulis continentibus plura ovula uniseriata superimposita; stylus glaber, albus, 8–12 mm. longus; stigmatibus lamellae, lanceolatae, acutae. *Capsula* erecta, oblonga, quadrangularis, 4-sulcata, ad basin rotundata, acuminata in rostrum ad apicem, 2–2.5 cm. longa, 6 mm. lata, pubescens vel pilosa, tandem dehiscens usque ad basin; rostrum 3–5 mm. longum. *Semina* brunneolo-nigra, late ovata, 2–2.5 mm. longa faciebus conspicue et reticulatim rugosis, lateribus latis, transverse vel reticulatim rugosis.

Typus lectus ad Kanana (Dadri) in Punjab die 22 octobris 1962 a me et positus in herbario B.S.I. ad Dehra Dun sub numero *Nair 25127 A*; isotypi, *Nair 25127 B-E*, et paratypi, *Nair 25132 A-E*, *25137 A-C* et *25146 A-E* lecti eodem loco ac tempore, positi in eodem herbario.

***Sesamum mulayanum* Nair spec. nov.**

Strongly smelling annual 0.5 to 3, rarely up to 4 m. high, often branched. Stems and branches in their upper part quadrangular with furrowed sides, pubescent becoming glabrescent, rarely pilose, usually more or less glandular. Leaves very variable often heteromorphic, opposite or upper usually alternate, thinly pubescent to glabrous above, glandular below, thinly pubescent on the prominent nerves becoming glabrescent; lower leaves long petioled, petiole 2 to 12 cm., usually palmately 3-foliate, 3-lobed or 3-partite, in feebler ones undivided, ovate from a rounded or obtuse base, acute obtuse or rounded, coarsely dentate serrate; higher leaves gradually shorter petioled 0.75 to 2.5 cm., more or less ovate-oblong-lanceolate or even linear from an acute base, entire, acute. Flowers solitary in the axils of higher leaves; pedicel short 0.2 to 0.5 cm. long, with 2 sessile yellow glands each in the axil of a bract, erecto-patent. Calyx persistent 0.4 to 0.75 cm. in fruit, thickened and obconical, segments oblong to lanceolate, acute or rather obtuse, pubescent. Corolla 2.25 to 3.5 cm., pink or pinkish white, whitish pubescent, obliquely campanulate. Stamens 4, epipetalous, didynamous. Filaments glabrous arising from a mild band of hairs, 0.6 to 0.9 cm. long; anthers 0.3 to 0.35 cm. long, dorsifixed, glabrous, connective prolonged and terminating in a globose gland; staminode minute or wanting. Disc at the base of the ovary annular, regular. Ovary slightly compressed 0.4 cm. long, more or less rounded at the apex, pilose 2-locular becoming 4-locular due to parietal radial false dissepiment, each compartment containing many 1-seriate superposed ovules; style glabrous, white, 0.8 to 1.2 cm. long; stigmatic lamellae lanceolate, acute. Capsule erect, oblong, quadrangular, 4-grooved, rounded at the base, acuminate into a beak at the apex, 2 to 2.5 cm. long, 0.6 cm. broad, pubescent to pilose, finally splitting down to the base; beak 0.3 to 0.5 cm. long. Seeds brownish black, broadly ovate, 0.2 to 0.25 cm. long, faces conspicuously reticulately rugose, side broad, transversely or reticulately rugose.

The type of the new species has been collected at Kanana (Dadri) in Mahendragarh District, Punjab State, at an altitude of about 250 m. on 22nd October 1962 by N. C. Nair and has been deposited in the Herbarium of the Botanical Survey



*Sesamum mulyanum* Nair.

Fig. 1. Flowering branch. Fig. 2. Flower. Fig. 3. Sepal. Fig. 4. Corolla opened out to show insertion of stamens. Fig. 5. Anther from the back. Fig. 6. Gynoecium. Figs. 7 and 8. Fruits. Fig. 9. Seed.

of India, Northern Circle, Dehra Dun under the number *N. C. Nair* 25127 A. The isotypes *N. C. Nair* 25127 B-E are preserved in the same herbarium. The paratypes *N. C. Nair* 25132 A-E, 25137 A-C, 25146 A-E, collected from the same locality on the same day are deposited in the same herbarium.

This species comes near the African species *Sesamum angustifolium* Engl. in many respects such as (1) general character of the plant (2) nature of the upper leaves and pubescence (3) the nature of reticulations and thick sides of the seeds. The new species differs from it in (1) long petioled, often trifoliate, tripartite or trilobed, and often dentate lower leaves (2) pedicellate flowers (3) glabrous anthers (4) shorter filaments (5) less pubescent ovary (6) shorter style (7) fruit (8) larger seeds. In the toothed and lobulate or trifoliate lower leaves and thick sides of the seeds the species approaches *S. radiatum* Schum. but differs in the length of the capsule beak (beak short in *S. radiatum*) and in the nature of reticulation in seeds (seeds radially rugose in *S. radiatum*). From *S. indicum* the taxon differs in the nature of pods (pods abruptly and shortly beaked at the apex in *S. indicum*) and seeds (seeds smooth in *S. indicum*).

The taxon is a very striking plant. It grows gregariously in waste places, on road sides, in cultivated fields as a weed, and on hills. It is frequently grazed upon by sheep and cattle. The plant flowers in August-September and in fruit from October-November.

Examination of the species of *Sesamum* in the herbarium of the Botanical Survey of India Northern Circle, has revealed that the new species is fairly wide-spread and has been collected from the following localities.

PUNJAB : Mahendragarh, *N. C. Nair* 24156, 25157; Narnaul, *N. C. Nair* 25165; Gurgaon, *N. C. Nair* 25261.

RAJASTHAN: Lohargal, *N. C. Nair* 1033, 1039; Khetri, *N. C. Nair* 25179.

UTTAR PRADESH : Ajab pur (Dehra Dun), *N. C. Nair* 25273; Lakhotei (Bulandshar), *N. P. Singh* 25422; Mirzapur, *U. C. Bhattacharyya* 17700.

The new taxon is named in honour of the author's teacher Dr. B. N. Mulay, Professor of Botany, Birla College of Science, Pilani, Rajasthan.

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