

## ***Teramnus* P. Browne (Papilionadeae- Leguminosae) - A new addition to flora of Andaman and Nicobar Islands, India.**

**Fouziya Saleem<sup>1,2</sup>, Lal Ji Singh<sup>1\*</sup>, and Arun K. Pandey<sup>2</sup>**

<sup>1</sup>Botanical Survey of India, Andaman and Nicobar Regional Centre, Port Blair, Andaman and Nicobar Islands, India.

<sup>2</sup>Department of Botany, Mansarovar Global University, Sehore-466111, India.

**\*Corresponding author's E-mail:** Lal Ji Singh (laljisingsh1970@rediffmail.com), Botanical Survey of India, Andaman and Nicobar Regional Centre, Port Blair, Andaman and Nicobar Islands, India.

### **Abstract**

The genus *Teramnus* P. Browne is reported and described here as new record with single species *Teramnus mollis* Benth., for the first time from Andaman and Nicobar Islands, India.

**Key words:** *Leguminosae, papilionadeae, taxonomy, Teramnus*

### **Introduction**

*Teramnus* P. Browne is the genus of the agriculturally important legumes family *Fabaceae* (Leguminosae) and distributed in tropical and subtropical regions with eight species. In India, the genus *Teramnus* is found throughout from Himalayan southwards and represented by only four species viz, *Teramnus flexilis* Benth., *Teramnus mollis* Benth., *Teramnus labialis* (L.f.) Spreng. and *Teramnus repens* (Taub.) Baker f. subsp. *gracilis* (Chiov.) Verdc. (Sanjappa 1992, 2020).

During botanical exploration in the Andaman group of islands, we encountered *T. mollis* and recorded and described here as an addition to the flora of Andaman and Nicobar Islands (ANI) with a generic record for the first time. ANI are a group of 572 Islands and islets and well recognized centre of hot spots of bio diversity with higher number of endemism (Singh et al., 2014, 2021a, b; Singh & Misra 2020; Singh & Ranjan 2021; Singh 2021, 2023; Sivaramakrishna et al., 2021) where the family *Fabaceae* has received little attention from taxonomists. Although Legumes of ANI are recorded time to time by various authors (Vasudeva Rao., 1986; Sanjappa, 1992; Lakshminarasimhan & Rao., 1996; Hajra et al., 1999; Pandey & Diwakar, 2008; Singh & Murugan, 2014; Murugan et al., 2016; Naik et al., 2020; Naik & Singh 2020, Singh et al., 2021, Sanjappa, 2020). Recent floristic

explorations have resulted in discoveries of novelties in legumes (Saleem et al., 2023a, b).

The legumes collections from ANI were examined and found that found only one specimen deposited at the Herbaria of BSI (PBL) which was collected by *M. Venkat Ramana & Johnny Kumar Tagore* (0055) in 2011 and identified only at generic level. This specimen matches with our present collection. After critical examination, this has been identified as *Teramnus mollis* Benth., which is reported here as new generic record with single species. Currently *T. mollis* is the only species representing the genus *Teramnus* P. Browne from the ANI.

### **Material and methods**

To verify the identity of the specimens critical analysis of morphological characters was carried out by comparing our collections with the herbarium specimens from Indian herbaria (CAL, PBL) and online taxonomic databases and digital herbaria (<https://ivh.bsi.gov.in/e-Floras2008>; WCSP 2012; The Plant List 2013; POWO 2019; GBIF 2020; JSTOR 2020; The Herbarium Catalogue 2021) relevant taxonomic literature was also consulted. Herbarium specimens of the species are deposited in National Repository Herbarium (PBL) of Botanical Survey of India, Andaman and Nicobar Regional Centre. Field photographs of the species are provided for easy identification.



## Result

### Taxonomic Treatment

*Teramnus mollis* Benth., J. Linn. Soc. Bot. 8: 265. 1865. Baker in Hook. F., Fl. Brit. India 2:185.1876.

Perennial climber, trailing, branchlets terete, with white ferruginous hairs. Leaves trifoliolate, 10 x 6 cm, petioles 3cm long, glabrous; leaflets 3, ovate, acuminate at apex, rounded at base, entire on margin, glabrous on both surfaces. Inflorescences raceme; Flowers 1cm long, pedicellate, pedicels 4 mm long, hairy; bracts 5mm, lanceolate, acuminate at apex, hairy. Bracteole 3mm long, lanceolate, acuminate at apex, hairy; Calyx 1cm long, with adpressed hairs; calyx tube 8mm long, calyx teeth 2 mm, lanceolate, equal. Corolla white with purple tinge; standards 8x3mm, obovate, emarginate at apex, glabrous, wing petals 7x2 mm, oblong, truncate at base; keel petals 5x2 mm, slightly falcate. Stamens 10, diadelphous (9+1); staminal tube 6 mm, anthers uniform, 2mm long. Pod 7cm, linear, with adpressed hairs, beaked, beak 1 mm long, 8-10 seed per pod. Seeds almost cylindrical, covered with adpressed hairs, 4mm long and 3mm diam, blackish brown, aril slightly developed.

**Flowering & fruiting:** November-February.

**Habitat and Ecology:** Edges of Evergreen forest with moist soil. It grows in association with *Dysolobium pilosum* (J.G.Klein ex Willd.) Maréchal, *Chromolaena odorata* (L.) R.M. King & H. Rob. and *Mesosphaerum suaveolens* (L.) Kuntze.

**Distribution:** **India:** Assam, Manipur, West Bengal; **ANI:** Andaman Islands (Present work); **World:** Bangladesh, Bhutan, Burma and Thailand.

### Conservation status

Taxon is currently known from a few localities of North and Middle Andaman. Distribution in two different localities indicates that it is quite probable that the

species also found in other Islands. Due to lack of data on population distribution, the conservation status of *T. mollis* Benth. is assessed here as 'Data Deficient' (DD) category according to the IUCN criteria (IUCN 2020) for ANI.

**Specimens examined:** INDIA, Andaman & Nicobar Islands, Middle Andaman, Kalara Junction, 12°51'26"N, 92° 51'40"E. Alt. 53, 13.12.2021, Fouziya Saleem 33418; North Andamans, Kalara Junction, 13°11'07"N, 92°55'45"E. Alt. 74m, 19.12.2021, Fouziya Saleem 33431; North Andaman, Kalighat, 18.02.2011, M. Venkat Ramana & Johny Kumar Tagore 0055.

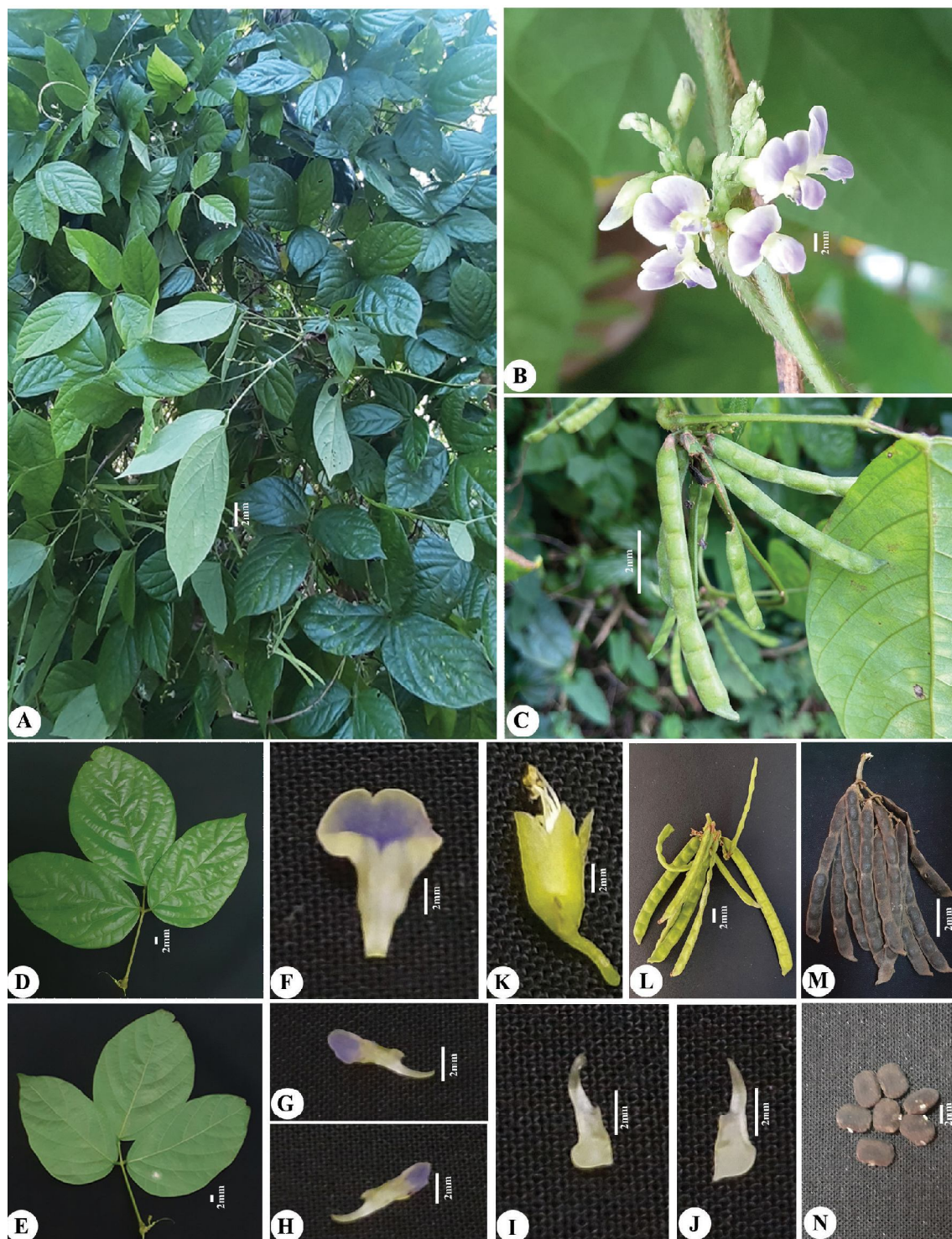
### Discussion

ANI is one of the richest and unique phytogeographical region in India with higher number of endemism (Singh et al. 2014, 2021a, b; Singh & Ranjan 2021) whereas Leguminosae need to be explored in more depth to understand the diversity (Saleem et al., 2023a, b). During the plant explorations carried out in Andaman group of Islands, authors spotted the leguminous genus *Teramnus* P. Browne and described here as new generic record for the flora of ANI with single species *Teramnus mollis* Benth.

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**Fig.1: *Teramnus mollis*** A: Habit, B: Flower; C: Fruit; D: Leaf (dorsal), E: Leaf (ventral), F: Standard petals, G-H: Wing petals, I-J: Keel petals, K: Calyx with Stamens, L-M: Pods, N: Seeds.



## References

- eFloras (2008). Missouri Botanical Garden, St. Louis, MO & Harvard Univ. Herbaria, Cambridge, MA, <<http://www.efloras.org>>, accessed 9 September 2021.
- GBIF (2020). GBIF backbone taxonomy. <<https://www.gbif.org/species/>>, accessed 13 January 2020.
- IUCN (2020). The IUCN Red List of Threatened Species, version 2020–2. IUCN Red List Unit, Cambridge U.K. Available from: <https://www.iucnredlist.org> (accessed 9 July 2020).
- JSTOR (2020). Global plants. JSTOR, Ithaka, <<https://plants.jstor.org/>>, accessed 28 July 2020.
- Hajra, P.K., Rao, P.S.N. & Mudgal, V. (1999). Flora of Andaman-Nicobar Islands (Ranunculaceae–Combretaceae) Botanical Survey of India, Calcutta, 1, pp. 1-487.
- Lakshminarasimhan, P. & Rao, P.S.N. (1996). A supplementary list of Angiosperms recorded from Andaman and Nicobar Islands. *Journal of Economic and Taxonomic Botany* 20:175-185.
- Murugan, C., Prabhu, S., Sathiyaseelan, R. & Pandey, R. P. (2016). A Checklist of Plants of Andaman and Nicobar Islands. ENVIS Centre on Floral Diversity. Botanical Survey of India, Kolkata. <http://bsienviis.nic.in/Database/Checklist-of-Andaman-NicobarIslands24427.aspx>.
- Naik, M.C. & Singh, L.J. (2020). Two legume species additions to the flora of Andaman & Nicobar Islands, India. *Abrahamia* 5(1): 1–4.
- Naik, M.C., Singh, L.J. & Ganeshaiah, K.N. (2020). Floristic diversity and analysis of South Andaman Islands (South Andaman District), Andaman & Nicobar Islands, India. *Species*, 21(68): 343–409.
- Pandey, R.P. & Diwakar, P.G. (2008). An integrated checklist of plants in Andaman & Nicobar Islands, India. *Journal of Economic and Taxonomic Botany*, 32: 403–500.
- POWO (2019). Plants of the World Online. Facilitated by the R. Bot. Gard. Kew, <[www.plantsoftheworldonline.org/](http://www.plantsoftheworldonline.org/)>, accessed 1 May 2021.
- Rao, M.K.V. (1986). A preliminary report on the angiosperms of Andaman and Nicobar Islands. *Journal of Economic and Taxonomic Botany* 8: 107–184.
- Saleem, F., Singh, L.J. & Pandey, A.K. (2023a) Two additions to the Legumes Flora of Andaman and Nicobar Islands, India. *Journal of the Andaman Science Association* 28(1):40-46.
- Saleem, F., Singh, L.J., Subramaniam, S., Pandey, A.K. (2023b). *Crotolaria nicobarica* (Fabaceae): a new species from Andaman and Nicobar Islands, India. Doi: 10.1111/njb.04077.
- Sanjappa, M. (1992). Legumes of India. Bishen Singh Mahendra Pal Singh, Dehra Dun.
- Sanjappa, M. (2020). Fabaceae (=Leguminosae, nom alt.). In: Ashiho Asosii Mao and Sudhansu Sekhar dash (Eds.), Flowering Plants of India, An Annotated Checklist (Dicotyledons). 1:300-446.
- Singh, L.J. (2021). *Septemeranthus* (Loranthaceae), a new monotypic genus from the Andaman and Nicobar Islands, India and its relationship with allied genera. *Feddes Repertorium* 132:193–203.
- Singh, L.J. (2023). *Dendrophthoe longensis* L.J. Singh, A new species of Dendrophthoe (Loranthaceae) from Andaman and Nicobar Islands India. *Feddes Repertorium* 134(1):54–65.
- Singh, L.J., Misra, D.R. (2020). Reappraisal of the genus *Cycas* L. (Cycadaceae) in Andaman and Nicobar Islands, India. *Indian Journal of Forestry*. 43(1):46-57.
- Singh, L.J. & Murugan, C. (2014). Seed plant species diversity and conservation in Dhanikhari Experimental Garden cum Arboretum in Andaman and Nicobar Islands. In: Nehera, S; Gothwal, R.K. & Ghosh, p.(eds.) *Biodiversity in India : Assessment, scope and conservation*. Lambert Academic Publishing Heinrich- Booking- str. Saarbrücken, Germany. 253-280.
- Singh, L.J.; Murugan, C. & Singh, P. (2014). Plant Genetic Diversity of Endemic Species in the Andaman and Nicobar Islands. – In: *National Conference on Islands*



- Biodiversity*, U.P. State Biodiversity Board, Lucknow 49–57.
- Singh, L.J. & Ranjan, V. (2021). *New Vistas in Indian Flora*. vol. 1 & 2: Bishen Singh Mahendra Pal Singh, Dehra Dun, Uttarakhand, India, pp. 417 & 819.
- Singh, L.J., Ranjan V., Sinha, B.K., Mishra, S., Purohit, C.S., Vivek C.P., Naik, M.C. & Ekka, G.A. (2021). An Overview of Phytodiversity of the Andaman and Nicobar Islands, India. (In: eds. L.J. Singh & V. Ranjan, *New Vistas in Indian Flora*. Bishen Singh Mahendra Pal Singh, Dehra Dun, India, 2: 381- 399.
- Singh, L.J., Ekka, G.A., Vivek, C.P., Misra, D.R. (2021a). Gymnosperms of the Andaman and Nicobar Islands: An Overview (In: eds. L.J. Singh & V. Ranjan, *New Vistas in Indian Flora*. Bishen Singh Mahendra Pal Singh, Dehra Dun, India, 1: 265-278.
- Singh, L.J., Ranjan V., Sinha, B.K., Mishra, S., Purohit, C.S., Vivek C.P., Naik, M.C., Ekka, G.A. (2021b). An Overview of Phytodiversity of the Andaman and Nicobar Islands, India. (In: eds. L.J. Singh & V. Ranjan, *New Vistas in Indian Flora*. Bishen Singh Mahendra Pal Singh, Dehra Dun, India, 2: 381- 399.
- Sivaramakrishna P., Yugandhar P. & Singh L.J. (2021) *Crotalaria lamelliformis* (Fabaceae: Crotalarieae), a new species from Eastern Ghats of Andhra Pradesh, Peninsular India. *Phytotaxa* 490(1):71-81.
- The Herbarium Catalogue (2021). R. Bot. Gard. Kew, <[www.kew.org/herbcat](http://www.kew.org/herbcat)>, accessed 9 September 2021.
- The Plant List (2013). Version 1.1. Published on the Internet: <http://www.theplantlist.org/> (accessed 28.12.2018).
- WCSP (2012). World checklist of selected plant families. Facilitated by the R. Bot. Gard. Kew, <<http://wesp.science.kew.org/>>, accessed 3 April 2017.

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