



Achievements and Progress Report

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Flora of India Volume 20

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Flora of India Volume 20

- **Name of the Project:** Flora of India Volume 20
- **Families:** Gesneriaceae, Bignoniaceae, Pedaliaceae, Acanthaceae
- **Diversity:** 748 taxa (comprising 694 species, 05 subspecies, 48 varieties and 01 forma in 117 genera, including 27 cultivated taxa (26 species and 01 variety in 09 genera)

- **Officials involved:**

(Late) Dr. P. Lakshminarasimhan, Scientist “E” & Team Leader

Dr. W. Arisdason, Scientist “D”

Dr. K. Karthigeyan, Scientist “E”

Dr. Gopal Krishna, Botanical Assistant



Allotment of Work

- **(Late) Dr. P. Lakshminarasimhan:** Tribes Acantheae, Nelsonieae and Thunbergieae: ACANTHACEAE [37 species in 08 genera] – by **Dr. Debatri Panja & Dr. P. Lakshminarasimhan.**
- **Dr. W. Arisdason:** Tribe Justiceae (Subtribes Andrographidinae, Asystasiinae and Barleriinae): ACANTHACEAE [109 species, 03 subspecies and 07 varieties in 12 genera] – by **Dr. Tinku Ghosh & Dr. H.S. Debnath, Scientist “E” (Retd.). Andrographis and Haplanthus – by Dr. G. Gnanasekaran & Dr. G.V.S. Murthy, Scientist “G” (Retd.).**
- Tribe Ruellieae (Subtribes Polyspermeae and Tetraspermeae): ACANTHACEAE [181 species, 05 varieties and 01 forma in 09 genera] – by **Dr. W. Dinesh Albertson & Dr. P. Venu, Scientist “G” (Retd.).**



Allotment of Work

- **Dr. K. Karthigeyan**: Subtribe Justiciinae: ACANTHACEAE [138 species and 23 varieties in 11 genera] – by **Dr. Jayasri Bhattacharya**, Scientist “E” (Retd.).
- **Dr. Gopal Krishna** (with late Dr. P. Lakshminarasimhan): GESNERIACEAE [144 species, 01 subspecies and 05 varieties in 27 genera, besides 14 cultivated species in 09 genera] – by (late) **Dr. U.C. Bhattacharyya**, Scientist “E”.
- PEDALIACEAE (with late Dr. P. Lakshminarasimhan): [07 species and 01 subspecies in 03 genera] – by (late) **Dr. N.C. Nair**, Scientist “E”.

BIGNONIACEAE, comprising 66 species and 04 varieties (both naturalized and cultivated) in 39 genera – by **Dr. V.K. Madhukar & Dr. S.K. Srivastava**, Scientist “E” (Retd.).



Accomplished Works



- Initially, the comprehensive checklists of all 04 families of Volume 11 were prepared and submitted.
- Nomenclature, bibliographic citations, vernacular names, description, phenology and distribution (India, World), for every taxon are updated.
- Correct or currently accepted names are provided after authentic published literature, eFloras, and international databases such as **IPNI**, **POWO**, **The Plant List**, **Tropicos** and **World Flora Online**.
- Expertise opinions from Drs. **K.N. Gandhi** (HUH), **J.R.I. Wood** (Oxford), **Michael Möller** (E), **D.J. Middleton** (SING), **A. Weber** (MO) and **Mark Carine** (BM) were sought.
- Authors' of Plant Names (in conformity with **Brummitt & Powell, 1992/IPNI**) and Bibliographic Citations are standardized (in conformity with **TL2/B-P-H**) as recommended by the **Code (Turland & al., 2018)**.
- Reworked **140** illustrations and **225** photographs gathered from various researchers and personal photographs by the officials engaged in this work.

Major Challenges Faced

- Around **65** taxa have been added to the taxonomic account of the family **Gesneriaceae**.
- About **15** species and **02** varieties in **05** genera have been added to the taxonomic account of the family **Bignoniaceae**
- Similarly, **32** taxa have been added to taxonomic account of the family **Acanthaceae**: **Andrographis** (**01** sp.), **Barleria** (**03** spp.), **Codonacanthus** (**01** sp.), **Gymnostachyum** (**01** sp.), **Justicia** (**02** spp. and **02** vars.), **Lepidagathis** (**06** spp.) and **Strobilanthes** (**16** spp.).
- Changes in the nomenclature, especially at generic level, for instances the drastic changes in **Justicia** (**Rungia**) and **Strobilanthes** (**Aechmanthera**, **Clarkeasia**, **Hemigraphis**, **Stenosiphonium**).
- Reconstruction of keys to genera and species.



Earlier MS vs Final version – A comparison

Sl. No.	Family	Genera	Species	Subspecies	Variety	Forma
1.	Gesneriaceae	24 (27)	120 (144)	00 (01)	03 (05)	–
2.	Bignoniaceae	34 (39)	51 (66)	01 (00)	03 (04)	–
3.	Pedaliaceae	03 (03)	08 (06)	00 (01)	–	–
4.	Acanthaceae	45 (39)	388 (454)	03 (03)	37 (38)	01 (01)
TOTAL		106 (108)	567 (670)	04 (05)	43 (47)	01 (01)
Difference		02	103	01	04	00



Publications

1. Krishna, G., Bandyopadhyay, S., Bhattacharjee, A. & Lakshminarasimhan, P. 2017. The correct lectotypification of *Championia multiflora* (Gesneriaceae). *Phytotaxa* 328(2): 198–200.
2. Krishna, G. & Lakshminarasimhan, P. 2018. A new species of *Henckelia* (Gesneriaceae) from Arunachal Pradesh, India. *Taiwania* 63(4): 397–401.
3. Gnanasekaran, G., Arisdason, W. & Deng, Y. 2020. An overview on the validation of the name *Andrographis longipedunculata* (Acanthaceae). *Phytotaxa* 433(1): 75–76.
4. Karthigeyan, K., Arisdason, W. & Rasingam, L. 2020. Lectotypification of *Justicia anfractuosa* (Acanthaceae), an Endemic and Rare Species from Northeast India. *J. Jap. Bot.* 95(1): 39–40.
5. Gnanasekaran, G., King, A.F.J. & Arisdason, W. 2020. Taxonomy and lectotypification of *Lepidagathis barberi* (Acanthaceae), a steno endemic species from Tamil Nadu, India. *Phytotaxa* 438(2): 151–155.
6. Krishna, G., Bhattacharjee, A., Arisdason, W. & Bandyopadhyay, S. 2021. (042) Proposal to add a new Example under Article 36.1. *Taxon* 69(6): 1388.



Conclusion

**The updated final manuscript (along with 140 illustrations) of
Flora of India Volume 20 was submitted to the
Director, BSI and Publication-in-Charge on 15.12.2020**



Thank you

