

Species Datasheet

Datasheet No. A-061.107.005
(family.genus.species)

DBT- Network Programme

1. Taxon:

Species: *Vanda cristata* Wall. ex Lindl.

Subspecies:

Variety:

Cultivar

Hybrid

Image file

2. Synonyms:

Aerides cristata (Wall. ex Lindl.) Wall. ex Hook. f.

Luisia striata (Rchb.f.) Kraenzl.

Trudeliacristata (Wall. ex Lindl.) Senghas ex Roeth

Trudeliacristata (Lindl.) Senghas

Vandastriata Rchb.f.

3. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperms
- Clade: Monocots
- Order: Asparagales Link
- Family: Orchidaceae Juss.
- Subfamily: Epidendroideae
- Genus: *Vanda* R.Br.
- Species: *Vanda cristata* Wall. ex Lindl.

Bentham and Hooker (1862)

Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledonae
Series: Microspermae
Ordo: Orchideae
Genus: *Vanda* R.Br.
Species: *Vanda cristata* Wall. ex Lindl.

4. Distribution:

Global: Bangladesh, India, Nepal, Bhutan and Tibet China on moss covered trees at altitudes of 600 to 2300 m

India: Along Himalayas from Kumaon to Sikkim 1000-1300m

5. Indigenous/Exotic/Endemic; Cultivated/Wild:

6. Threat Status:

IUCN:

BSI:

7.Habit and Habitat:Grows as small sized epiphyte forming thick clusters on oaks in Kumaon hills

8.Life Form:Herbaceous perennial

9.Economic Importance:Ornamental,Medicinal, leaf paste as tonic and expectorant

10. Probable Progenitor of:

11.DNA

C-value Methodology

2C (8.82 pg)¹⁸Feulgen microdensitometry¹⁸

12.Basic chromosome number(s): $x=19$ ^{1, 8, 12, 13, 14, 15, 18, 23, 24, 25, 31, 33}

13. Zygotic chromosome number(s): $2n=38$ ^{1, 8, 12, 13, 14, 15, 18, 23, 24, 25, 31, 33},
⁷⁶^{8, 12, 13, 14}

14. Gametic chromosome number(s): $n=19$ ^{1, 13, 14, 15, 21, 23}

15.Specialized chromosomes (B chromosomes/Sex chromosomes/Polytene chromosomes/Neocentric chromosomes):

Image file

16.Ploidy level:Diploid ^{1, 8, 12, 13, 14, 15, 18, 23, 24, 25, 31, 33}, Tetraploid^{8, 12, 13, 14}

Image file

17.Agametoploidy:

18.Nature of polyploidy (auto, segmental, allo, autoallo):4x cytotype is autopolyploid^{8, 14}

19.Genomic formula:

20.Aberrant chromosome number(s)(aneuploidy, aneusomaty, polysomaty):

21.Somatic chromosomes:^{8, 13, 14}

Karyotype Median, submedian^{8, 13, 14}

Chromosome size Small^{8, 13, 14}

NOR chromosome(s)

Degree of asymmetry Symmetrical^{8, 13, 14}

Image file

22. Banding pattern(s):

Image file

23.Physical mapping of chromosomes:

In situ hybridization

Image file

Fluorescent in situ hybridization:

Image file

24.Genomic in situ hybridization:

Image file

25. Linkage map:

Image file

26.Chromosome associations:

Female meiosis

Male meiosis 2x cytotype: 19 II^{8, 13, 14}

Image file

27.Chromosome distribution at anaphase I: 2x cytotype shows normal 19:19 distribution at A I. Some lagging bivalents may show late disjunction^{16, 21}

28. Genetic diversity:

Chromosomal level

Image file

DNA level

29. Any other information (Apomixis; Inversion; Male sterility; Pollen grain mitosis; Pollen stainability; Translocation etc.):