Genus Datasheet

Datasheet No. A-028.003 **DBT- Net**
(Family.Genus)

1. Genus: *Amorphophallus* Blume ex Decne.

2. Systematic Position:

APG IV (2016)

- Kingdom: Plantae
- Clade: Angiosperm
- Clade: Monocots
- Order: Alismatales R. Br. ex Bercht. & J. Presl
- Family: Araceae Juss.
- Genus: *Amorphophallus* Blume ex Decne.

Bentham and Hooker (1862)
Kingdom: Plantae
Division: Phanerogamia
Class: Monocotyledones
Series: Nudiflorae
Ordo: Aroideae Arn.
Genus: *Amorphophallus* Blume ex Decne.

3. Species:

Global: 200

India: 19

4. Taxonomic riddles:

5. Distribution:

Global: Tropical Africa, Madagascar, tropical and subtropical Asia, the Malay Archipelago, Melanesia & Australia

India: Andaman Island, Assam, Bihar, Peninsular India, Sikkim

6. Habit and Habitat: Tuberous herb. Most of the species occur in tropical humid forests, seasonal forests and open woodland, and rarely in limestone. Sometimes it grows in waste places or areas of human habitation and edges of cultivated farms

7. Economic Importance: The tubers of *A. paeoniifolius* are widely used sources of carbohydrate in tropical Asia.

8. DNA content range: **Methodology:**

2C (7.54 - 31.67pg)[1] Feulgen microdensitometry[1]

9. Basic chromosome number(s): x=13[5,6,13,16]
x=14[5,6,16]

10. Zygotic chromosome number (s): 2n=26 [1,2,3,5,6,8,9,10,13,14,15,16,17,18,39,40,41]
2n=28 [1,5,6,7,8,9,10,15,18,19,20,21,22,23,24]
2n=36 [3,4]
2n=39 [1,5,6,7,8,9,10,15,16]

11. Gametic chromosome number (s): n=13 [14]
n=14 [6,15,21,22,25]

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

13. Ploidy level: Diploid[10,18]

Triploid[1,5,6,8,9,10,16]

14. Nature of polyploidy (auto, segmental, allo, autoallo): Autopolyploidy[1,10], Allopolyploidy[6]

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

16. Karyograms:[1,3,6,9,10,13,14,16,23] **Meiosis:**[6,14,21]

17. Banding pattern(s):

18. Physical mapping of chromosomes: **GISH:**

19. Phylogenetic relationship at Chromosomal; DNA level: Chromosomal level[8,9]

DNA level [11,12,27,28,29,30,31,32,33,34,35,36,37,38,43,44,45]

20. Cytogenetic mechanism (s) underlying evolution: It has been suggested that the triploid species arose from diploid bulbiferous ones and thus preadapted to avoid the disadvantage of sexual infertility[1]; Structural alternations in chromosomes and polyploidy played a role in the origin and evolution of species[10]; Translocation at the chromosomal level could have resulted in a shift of the habitat during evolution among species[14]

21. Linkage map:

22. Any other information: Pollen fertility 5.69%[10]
Apomixis [9,10,16]
Pollen mitosis[21]
Translocation[14]
Desynapsis[26]