

Genus Datasheet

DBT- Network Programme

Datasheet No. P-037.001
(Family.Genus)

1. Genus: *Asplenium* L.

2. Systematic Position:
Christenhusz 2011

- Class: Equisetopsida C. Agardh
- Subclass: Polypodiidae Cronquist, Takht. & Zimmerm.
- Order: Polypodiales Link.
- Family: Aspleniaceae Newman
- Subfamily:
- Genus: *Asplenium* L.

3. Species:

Global: 459 (Accepted), 1302 (unassessed)

India: 50

4. Taxonomic riddles: 124, 149, 150, 151, 152, 153

5. Distribution:

Global: Cosmopolitan

India:

6. Habit and Habitat:

7. Economic Importance: Some species used in horticulture

8. DNA content range:

Methodology

2C (10.80-18.11pg)
2011

Flow cytometry Redondo et al 1999, Siljak Yakov 2010, Bainard

9. Basic chromosome number(s): $x=36$ ^{1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26}

^{35, 36, 37, 38, 40, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 57, 58, 59, 60, 61, 62, 63, 64, 66, 68, 69, 70, 71, 72, 73,}

^{80, 81, 82, 83, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 104, 105, 108, 109, 110, 111, 112, 113,}

^{118, 119, 120, 121, 122, 123, 125, 129, 130, 132, 134, 136, 137, 138, 139, 140, 141, 143, 144, 145, 146, 147}

³⁸ ^{4, 7, 11, 13, 15, 49, 62, 64, 73}

³⁹ ^{33, 54, 55, 101, 102}

⁴⁰ ^{4, 7, 13, 15, 65, 80, 86, 122, 123, 136, 137}

10. Zygotic chromosome number(s): 72 ^{3, 4, 5, 6, 10, 11, 21, 26, 36, 37, 45, 56, 67, 68, 74, 78, 81, 84, 89, 90,}

^{123, 132, 138, 139, 154}

^{c.72}⁸⁴

⁷⁶^{4, 7, 11, 13, 15, 70}

^{c.78}⁵⁵

⁷⁸¹⁰¹

⁸⁰¹²¹

¹⁰⁸^{9, 10, 11, 60, 86, 97, 133, 137, 141}

¹¹²^{4, 7, 11, 13}

¹¹⁶¹

¹¹⁷^{101, 102}

¹²⁰^{4, 7, 13, 15}

^{c.140}³⁹

^{c.144}^{75, 87}

^{1, 3, 4, 5, 6, 8, 9, 10, 11, 12, 14, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 35, 36, 37, 38, 40, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 57, 58, 59, 60, 61, 62, 63, 64, 66, 68, 69, 70, 71, 72, 73,}

156^{55, 101, 102}

160⁸⁶

216¹⁰⁶

360¹⁰⁶

288^{1,38, 88}

c.360¹²³

432⁸⁶

11. Gametic chromosome number(s):n=36^{3, 4, 6, 9, 10, 11, 16, 17, 19, 20, 21, 23, 24, 26,31, 38, 40,41, 45, 50, 51, 59, 60, 62, 63, 64, 66, 69, 72, 73, 80, 85, 96, 98, 108, 115, 116, 120, 121, 123, 136, 138, 137, 140, 141, 143}

39^{33, 101}

40^{6, 65, 80, 121, 126, 128, 136, 137}

72^{1,3,4, 5, 6, 8,10,11, 12, 14, 16, 18, 24, 28, 29, 30,32,34, 35, 38, 43, 44,48, 49, 51, 58, 59, 60, 71, 80, 81, 86, 88, 98, 99, 105, 109, 110, 113, 114, 115, 116, 118, 119,121, 122, 123, 125, 128, 129, 134, 140, 142,143, 144, 146}

c.72^{107, 131,134}

76^{49, 62, 64, 73}

80^{38, 86, 122, 123}

c.108⁷⁹

108^{9, 10, 11, 16,24, 60, 97 115, 116}

117^{101, 102}

120^{122,123}

144^{4, 11, 12, 14,25, 38, 47, 49,52, 64, 80,86, 111, 112, 115, 116}

39, 43, 47, 63, 72, 113, 116, 117, 124⁹⁷

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

13. Ploidy level

Diploid (sexual)^{3, 4, 6, 11, 16, 17, 19, 20, 21, 22, 23, 24, 38, 40, 48, 49, 50, 51, 60, 62, 63, 64, 66, 69, 70, 80, 84}
108, 115, 116, 120, 121, 136, 137, 139, 154

Diploid (sterile)^{4, 5, 11}

Triploid (sterile hybrid)⁶⁰

Triploid (apogamous)^{9, 10, 11, 97, 101, 102}

Tetraploid (sexual)^{1, 3, 4, 5, 6, 8, 10, 11, 16, 18, 24, 28, 29, 34, 35, 38, 43, 44, 48, 49, 51, 53, 54, 57, 59, 61, 80, 86}
109, 110, 113, 114, 115, 116, 118, 119, 122, 123, 125, 128, 134, 144, 146, 147, 154

Tetraploid (hybrid)^{4, 5, 8, 11}

Hexaploid (sexual)^{16, 79, 115, 116, 122, 123}

Hexaploid (hybrid)¹⁰⁶

Octoploid (sterile hybrid)^{1, 38}

Octoploid (sexual)^{1, 25, 47, 52, 49, 64, 80, 86, 88, 111, 112}

Octoploid (aneuploid)¹³⁴

10-ploid (hybrid)¹⁰⁶

12-ploid^{86, 87}

14. Nature of polyploidy (auto, segmental, allo, autoallo):

Meiosis: 1, 3, 4, 5, 6, 7, 8,9, 10,11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23,24, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 38, 41, 42, 43, 44, 47, 48, 49, 50, 51, 52, 58, 59, 60, 63, 64, 65, 66, 69, 71, 72, 73,75, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 96,97, 98,99, 101, 102, 105, 106,108, 109, 110, 111,112, 113, 114, 115, 116, 118, 119, 120, 121,122,123, 125,126, 128, 129, 134,136, 137, 138,143, 144, 145,146

17. Banding pattern(s):

18. Physical mapping of chromosomes:

GISH:

19. Phylogenetic relationship at Chromosomal; DNA level: 124, 149, 150, 151, 152, 153

20. Cytogenetic mechanism (s) underlying evolution:

21. Linkage map:

22. Any other information: