

## Flora of China Pteridophytes Preferred Terms List

Section 12 of the FoC Guidelines gives formatting instructions for the descriptions. In addition, because the pteridophytes have unique characteristics from the flowering plants, a preferred terms list and order of characters list is being provided to you. For definition of terms the project has adopted David Lellinger's book *A Modern Multilingual Glossary for Taxonomic Pteridology*, Pteridologia 3, American Fern Society, 2002. If you have any questions about what terminology to use please request assistance from Libing Zhang ([Libing.Zhang@mobot.org](mailto:Libing.Zhang@mobot.org)).

### General terms:

FronD – the photosynthetic organ of ferns, usually consisting of a stipe and lamina.

Lamina – the expanded portion of a frond, usually consisting of a rachis or midrib.

Pinna (*pl.* pinnae) – primary division of a compound lamina.

Pinnule – the ultimate division of a second-order or more compound lamina. i.e. If a frond is 4 times pinnately compound, the primary divisions are pinnae, the ultimate divisions are pinnules (which may be lobed), and the intermediate level divisions would be described as second-order divisions and third-order divisions.

### Types of Axes and Lamina Structures:

#### Central axis of frond:

Stipe – the structure of a frond that connects the base of the lamina to the point of its attachment to the rhizome. (Similar to a petiole in the flowering plants.)

Rachis – the continuation of the stipe in a pinnate or pinnatifid frond.

Midrib – the major axis of a simple, entire or lobed, frond.

#### Axis within the lamina:

Costa (*pl.* costae) – the major axis of a pinna.

Vein (primary veins) – the veins running from the costa to the margin.

Connecting vein (secondary veins) – the veins connecting the primary veins, thus enclosing primary areoles.

Veinlet (tertiary veins) – the veins branching from the connecting veins (simple, forked, or anastomosing).

Free veinlets – The ultimate, free branches of the venation pattern (recurrent, excurrent, or without preference).

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Note: not every genus will include every character and some groups will require specialized additional characters. Please refer to the FoC Guidelines for additional formatting instructions.

If you have any questions please contact: Libing Zhang ([Libing.Zhang@mobot.org](mailto:Libing.Zhang@mobot.org)).

1. General comments on duration and habit (e.g. plants long lived perennials, floating aquatics, arborescent, epiphytic, time of sporulation)
2. Rhizomes:
  - A. Position relative to surface (deep-seated, surficial, erect, etc.)
  - B. Position and length (10 fronds per 5 cm of rhizome or average internodal length 1 cm)
  - C. Symmetry (radial, dorsiventral, bilateral)
  - D. Branched or not
  - E. Diameter
  - F. Indument (hairs, scales, etc., with description including length, shape, color, etc.)
3. Whole frond characters:
  - A. Evergreen vs. deciduous
  - B. Position if attached in a particular pattern or place (back from rhizome tip, clustered vs. widely spaced)
  - C. Overall length (measured or as ratio of stipe to lamina length (1/2-1/3 length of lamina))
  - D. Monomorphic or dimorphic
4. Stipe and rachis:
  - A. Color
  - B. Length (measured or as a ratio of stipe to lamina length (1/2-1/3 length of lamina))
  - C. Description of structure from base to apex
  - D. Cross-section-shape (terete, angled, ridged, adaxially grooved, etc.)
  - E. Aerophores (presence, shape, mucilage)
  - F. Indument
  - G. Ventilation bands (presence, lines, interrupted lines, multiple lines, lenticels)
  - H. Number of vascular bundles and, if applicable, pattern of bundles (horseshoe-shaped, strap-shaped, etc.)
5. Lamina (if dimorphic describe two types of fronds separately):
  - A. Shape
  - B. Length
  - C. Division (simple, pinnate, compound and two- three- or more times pinnate)
  - D. Base (truncate, cordate, tapered into winged petiole, etc.)

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- E. Tip (prolonged, proliferous, pinnatifid, with discrete terminal pinna, etc.)
  - F. Groove confluence (are the grooves of various axes confluent or not)
  - G. Indument
6. Pinnae (these descriptors apply to whole lamina in simple leaves):
- A. Length
  - B. Dromy (anadromy, catadromy, isodromy)
  - C. Shape and pattern of lobing (if dimorphic describe two types of pinnae separately)
  - D. Anything unusual about the pinnae (basal basiscopic pinnules elongate relative to basal acroscopic pinnules)
  - E. Base
  - F. Tip
7. Pinnules:
- A. Length and width
  - B. Shape and pattern of lobing
8. Venation:
- A. Pattern
  - B. Hydathodes (presence, lime-dots)
9. Sori:
- A. Type (discrete, acrostichoid, etc.)
  - B. Shape
  - C. Position (marginal, submarginal, costal, etc.)
  - D. Attachment relative to veins (terminal, lateral, on specialized short branch veins, etc.)
10. Indusia (presence, color, persistence, shape, attachment pattern, indument, texture)
11. Paraphyses (presence, persistence, shape)
12. Sporangia (generally used only in descriptions of genera or families):
- A. If heterosporous, describe two types of sporangia and spores separately
  - B. Size (large [visible with naked eye] vs. microscopic)
  - C. Stalk (relative length, number of cells long and/or wide)
  - D. Capsule (indument)
  - E. Annulus (presence, position, number of cells)
13. Spores:
- A. Color
  - B. Number per sporangium

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- C. Size
  - D. Shape
  - E. Surface pattern
14. Gametophytes (filamentous, ribbon-like, cordate, tuberous, etc.)
15. Number of spores per sporangium.
16. Chromosome number for sporophytic cells ( $2n = xx$ ) and whether known to be apogamous