**Table 3.** Clades of reference in the topologies under equal weighting, and including or excluding character dependencies. The subfamily assignable to such clades and their synapomorphies are given (character number within brackets), as well as the genera included. The symbol “-” indicates that the species was not found forming a clade with the remaining species of the genus.

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| --- | --- | --- | --- | --- | --- |
| **Clade** | **Subfamily assignable** | **Considering dependencies** | | **Ignoring dependencies** | |
| **Included Taxa** | **Synapomorphy** | **Included Taxa** | **Synapomorphy** |
| Clade I | Thamnopteroideae | *Thamnopteris*  *Chasmatopterys*  *Bathypteris* | Sclerenchyma ring of petiole base (33): *heterogeneous* -> *homogeneous* | *Thamnopteris*  *(- T. splendida)*  *Bathypteris* | Sclerenchyma lining leaf-trace abaxially (27): *absent* -> *continuous*  Sclerenchyma ring of petiole base (33): *heterogeneous* -> *homogeneous* |
| Clade II | Itopsidemoideae | *Lunea*  *Tiania*  *Itopsidema*  *Donwelliacaulis* | Cortex sclerenchymatous outer cortical layer (15): *thinner than parenchymatous layer, or thicker than parenchymatous layer* -> *absent*  Tips of petiolar vascular bundle after departure from stem (26): *straight or incurved* -> *recurved*  Sclerenchyma ring (32): *present* -> *absent*  Stipular wings or spines (38): *wings* -> *absent* |  |  |
| Clade III | Guaireoideae | *Guairea*  *Osmundacaulis*  *Shuichengella*  *Zhongmingella* | Number of leaf-trace protoxylem strands upon departure from stele (19): *one* -> *two*  Leaf-trace shape immediately after departure from stele (21): oblong or slightly concave -> strongly concave | *Guairea*  *Osmundacaulis*  *(- O. janae)*  *Lunea*  *Shuichengella*  *Zhongmingella* | Stele internal invaginations into metaxylem cylinder (8): *fewer than peripheral invaginations* -> *as many as or more than peripheral invaginations*  Scattered sclerenchyma in the inner cortex of the petiole (31): *absent* -> *present* |
| Clade IV | Osmundoideae | *Claytosmunda*  *Leptopteris*  *Millerocaulis*  *Todea*  *Osmunda*  *Osmundastrum*  *Plenasium*  *Palaeosmunda (- P. williamsii)*  *Anomorrhoea* | Number of leaf-trace protoxylem strands in central part of cortex (22): *more than two* -> *one*  Number of leaf-trace protoxylem strands upon departure from stem (24): *more than two* -> *one*  Origination of sclerenchyma associated with leaf trace (30): *extending into stem* -> *developing in petiole*  Predominant orientation of roots in mantle cross section as a measure of growth habit (44): p*rimarily vertical* -> *primarily radiating* | *Claytosmunda*  *Leptopteris*  *Millerocaulis*  *Todea*  *Osmunda*  *Osmundastrum*  *Osmundacaulis janae*  *Palaeosmunda* | Number of leaf-trace protoxylem strands in central part of cortex (22): *more than two* -> *two* |