



A key to the commoner ferns growing in woodland soils in Beds, Cambs, Northants & Peterborough

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v. 1.2

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This key includes the typical ferns found in broad-leaved woodlands and wet woodlands in the three counties. It is intended to be used on normal specimens, and may be less reliable for specimens in unusually dry and hot, or deeply shaded, situations. It is intended mainly for mature ferns, and not for recently germinated specimens: generally, ferns start with very simple leaves, and they become 1-pinnate first, then 2-pinnate, and finally 3-pinnate if that is the mature condition. Status, where given, refers to Beds, Cambs, Northants & Peterborough.

- 1 Fronds lanceolate, pinnae getting gradually shorter toward the base as well as toward the apex, longest pinnae about half-way along frond. Lowest pinna usually less than half as long as longest. Pinnules usually symmetrically sized. 2
Fronds triangular, lowest pinnae almost as long as longest, and longest always in lower half of blade. First 2-3 pinnules on basal side of lowest pinnae often much longer than their counterpart on upper side of same pinna. 7
- 2 Leaves arising singly along a creeping rhizome, usually a few centimetres apart. Fronds pale green, delicate-textured, rather soft and papery, 15-120cm long. Fronds held almost vertically. Pinnae rather widely separated, gradually getting shorter toward apex, but stopping suddenly without much shortening toward base. Pinnules with slightly wavy but not toothed edges, which are usually rolled downward. Spore masses small, circular, close to rolled-down edges, with tiny, weak, kidney-shaped coverings. Very rare, in fens and carr. **Marsh Fern** *Thelypteris palustris*
Leaves arising in tufts at the apex of a short stem or rootstock, shuttle-cock-like or spreading wider. Often darker green and tougher textures. Pinnae closer-set, sometimes overlapping. Pinnules usually toothed on edges. 3
- 3 Fronds delicate and 'lacy', bright yellow-green, the pinnules with deeply pinnately-lobed final segments. Lowest 2-3 pairs of pinnules pointing downward. Spore masses, if present, small and roughly semicircular, each with a weak covering, which varies from curved to hook-shaped, linear or L-shaped. Fairly frequent in Beds, only occasional elsewhere. **Lady-fern** *Athyrium filix-femina*
Fronds more robust, often darker green, the pinnules with toothed but not pinnately-lobed margins. Lowest pinnules aligned in same direction as those higher up. Spore masses circular, with a strong, circular covering with a notch at the lower side and a dimple in the middle - kidney-shaped to doughnut-like. 4
- 4 Apex of pinnules rounded, blunt or bluntly-pointed, not hair-tipped. 5
Most pinnules ending in a fine, bristle-like point. 6
- 5 Pinnules rounded at tip, evenly toothed all round. Stalk of frond a little less stout, moderately covered in golden-brown scales. Stalk $\frac{1}{4}$ - $\frac{1}{3}$ of frond length. Stalks of pinnae uniformly coloured, usually pale. Fronds usually darker green and softer-textured. Common throughout.
Male-fern *Dryopteris filix-mas*
Pinnules square-ended, as if cut off with scissors, more strongly toothed at tips than along sides. Stalk of frond more stout, covered thickly with longer, shaggier scales. Stalk usually $\frac{1}{4}$ or less of total frond length. A dark grey or blackish patch on the stalk of each pinna where it joins the main stalk. Fronds usually more yellow-green and tougher. Scarce or rare.
Scaly Male-fern *Dryopteris affinis*
[If very yellow-green, and fresh fronds are lemon-tea scented when crushed, cf.
Lemon-scented Fern *Oreopteris limbosperma* (very rare in Northants).]

- 6 Pinnules shortly stalked, quite distinct from each other. Most pinnules strongly asymmetrical at their bases, with a large lobe pointing toward the apex. Lowest pinnule with basal angle at least a right-angle. Fronds up to 1.5m, rather soft, drooping. Stalk of frond $\frac{1}{4}$ or more of the length of the blade, with pale golden-brown scales. Spores pale brown. **Soft Shield-fern** *Polystichum setiferum*
Pinnules narrowed at base, but scarcely stalked, often running together somewhat at their bases. Only the pinnules at the base of each pinna markedly uneven in size, the rest nearly symmetrical. Lowest pinnule with its edges forming an acute angle where they form the stalk. Fronds usually no more than 60cm long, rather tough, leathery and shiny. Stalk of frond $\frac{1}{4}$ - $\frac{1}{5}$ or less the length of the blade, with reddish-brown scales. Spores dark brown. **Hard Shield-fern** *Polystichum aculeatum*
- 7 Leaves arising singly along a creeping rhizome. Edges of pinnules smooth, down-rolled when mature. **8**
Leaves arising in tufts at the apex of a short stem or rootstock, shuttle-cock-like or spreading wider. Often darker green and tougher textures. Pinnae closer-set, sometimes overlapping. Pinnules usually toothed on edges. **9**
- 8 Often very large (up to 4m tall) with a stout, very tough stalk with a blackish, furry base. Fronds broadly triangular, usually clearly 3-pinnate, tough and leathery-glossy above. Spore masses linear, around down-rolled edges of pinnules. Common on sand and acid soils.
Bracken *Pteridium aquilinum*
Smaller (fronds 15-120cm long). Leaves arising singly along a creeping rhizome, usually a few centimetres apart. Fronds narrowly triangular or almost lanceolate, pale green, rather dull, delicate-textured, rather soft and papery. Fronds held almost vertically. Pinnae rather widely separated, gradually getting shorter toward apex, but stopping suddenly without much shortening toward base. Pinnules with slightly wavy but not toothed edges, which are usually rolled downward. Spore masses small, circular, close to rolled-down edges, with tiny, weak, kidney-shaped coverings. Very rare, in fens and carr.
Marsh Fern *Thelypteris palustris*
- 9 Leaf segments rather convex, with toothed margins. Spore masses on undersides of normal pinnules
(Buckler-ferns *Dryopteris*) **10**
Leaf segments flat, with completely untoothed (sometimes wavy) edges. Spore masses on modified upper pinnules which have no green blades. Very rare, wet heaths and bogs.
Royal Fern *Osmunda regalis*
- 10 Scales on leaf-stalk large, triangular, tapered, pale brown with a dark brown central stripe. Downward-pointing lowest pinnule on lowest pinna much longer than its upper counterpart. Fronds dark green, sometimes brownish, broadly triangular, up to 1.5m, often flopping over or lying on ground. Rootstock upright, and stout on mature specimens. Common in woodlands of all kinds, but scarce in Hunts.
Broad Buckler-fern *Dryopteris dilatata*
Scales on leaf-stalk small, blunt, uniformly translucent pale brown. Basal pinnules almost equal in size. Fronds pale or yellow-green, narrowly triangular or parallel-sided in lower half, usually less than 80cm, usually held rather stiffly upright. Rootstock more slender and tends to lie on the ground, with just the last few cm turned up. Scarce, in wet woodlands and carr.
Narrow Buckler-fern *Dryopteris carthusiana*

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