

# LEARN *about* FERNS

**A guide to identifying ferns at  
Simon Trail, Lamoine, ME**



# Simon Trail



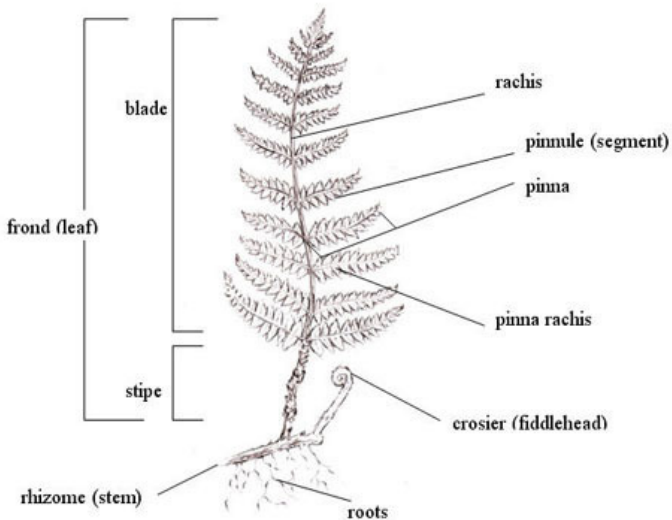
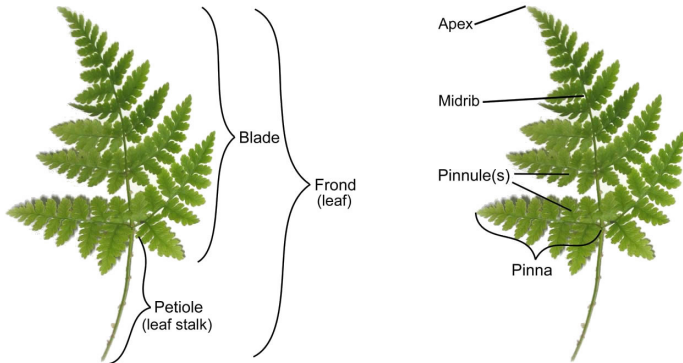
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Miles

- 1.Bracken Fern (*Pteridium aquilinum*)
2. Spinulose Wood Fern (*Dryopteris carthusiana*)
3. Narrow Beech Fern (*Phegopteris connectilis*)
4. Oak Fern (*Gymnocarpium dryopteris*)
5. Silvery Glade Fern (*Deparia acrostichoides*)
6. Intermediate Fern (*Dryopteris intermedia*)
7. Sensitive Fern (*Onoclea sensibilis*)
8. Lady Fern (*Athyrium filix-femina*)
9. Hay-scented Fern (*Dennstaedtia punctilobula*)
10. New York Fern (*Thelypteris noveboracensis*)
11. Clintons Fern (*Dryopteris clintoniana*)
12. Crested Fern (*Dryopteris cristata*)
13. Cinnamon Fern (*Osmundastrum cinnamomeum*)
14. Interrupted Fern (*Osmunda claytoniana*)

*This guide was compiled in 2021 with contributions from Mary Brennan, Harold Peachey, and Iris Simon.*

# PARTS OF A FERN



# BRACKEN FERN

*Pteridium aquilinum*

1

These are a very common knee to waist-high three-parted ferns that grow in dense colonies. They can be found in many varied habitats, but most often in drier, sunny, open areas and sandy soils.

FronDS are three ft. tall, blade is about two feet wide divided into three parts and very triangular, almost parallel to the ground and leathery in texture. Pinnae are longer than wide. Stipe long and about the same as the blade; smoother and rigid with grooved, square corners. Spreads most commonly from a dark, scaleless rhizome about 1 inch thick and often 15-feet long. Sori form infrequently in narrow lines near margins and covered partially by the relaxed edges.





# SPINULOSE WOOD FERN

*Dryopteris carthusiana*

2

This is a relatively common larger, lacy, clump-forming fern, often found in swamps, moist woods, and on slopes. The fronds are 8–30 inches and are 4–12 inches wide. The blade is mostly triangular, and nearly the same width at the base and middle. The pinnae are often angled upward; the lowest pinnules next to the rachis are usually longest and have fine-toothed margins with bristle tips that curve inward. The rachis is green with scattered pale brown scales. The stipe is often shorter than the blade with pale brown scales. The rhizome is thick, coarse, and creeping. Sori are small and situated midway between midvein and margin.



## NARROW BEECH FERN

*Phegopteris connectilis*

3

This is a common, light green, ankle-high triangular fern, found in wet, rocky areas near running water or in shaded, rich, moist forests and occasionally rock crevices. The “connectilis” part of its scientific name refers to the fact that the upper pinnae are fused toward the frond tip. The fronds are 6–14 inches long, 4–8 inches wide, tilted backward and cut into 12 pairs of opposite pinnae. The rachis is green, scaly, and hairy above and beneath, not winged at the lowest pinnae (which is also shorter than pinnae above and reflexed, or drooping). The stipe is 6–14 inches long and straw-colored (and usually about 1/3 longer than the blade). The sori are small, round, and near margins at the ends of veins.



## OAK FERN

*Gymnocarpium dryopteris*

4

This fern is a smaller, delicate, three-parted fern tilted mostly parallel to the ground. It's often found in moist, shaded, rocky soil in cool, coniferous and mixed woods. The fronds are 5–18 inches long, and new fronds emerge almost all summer. The blade is three-parted with distinct stalks, and each is deeply divided. The pinnules of the lowest pinnae cut almost to midvein. The upper surface lacks glandular hairs and the lower surface has few to none. The rachis is green and delicate. The stipe extends 4–11 inches long and is longer than the blade. The basal pinnae are nearly equal to the whole upper portion of the blade.





## SILVERY GLADE FERN

*Deparia acrostichoides*

5

This tall, soft, green fern has silvery sori and hairs that give it an overall pale sheen. It can be found in damp woods and on shaded slopes. The fronds are 12–13 inches long and 5–10 inches wide. Fertile fronds are taller and more slender; they appear in late summer. The blade tapers at both ends. Silvery hairs are common along the costae and veins. The lowest pair of pinnae point downward. Pinnules are not cut to midvein, and have finely toothed edges. The rachis is pale green and hairy. The groove of the costa is not connected to the groove of the rachis. The stipe is usually much shorter than the blade and has long white hairs until late summer. The rhizome is black and creeping. The sori are narrow, long, straight and in a herringbone pattern.

Overall this fern is very similar to Northern Lady Fern (*aythrium felix-femina*) but the pinnae are lobed instead of toothed. See card 8 for Northern Lady Fern.



# INTERMEDIATE FERN

## *Dryopteris intermedia*

6

These are medium to large semi-arching laxy ferns that grow in upright circular clusters with the previous year's dead (though still mostly green) fronds lying at the base. Fronds are 1-3 feet long; 4-10 inches wide and seemingly evergreen. The blade has glandular hairs on the rachis and costa. Look at the innermost pinnules (closest to rachis) of basal pinnae and you'll notice they are slightly shorter than the adjacent pinnules on the same side of the costa. There is a medial dark stripe on the stipe that is a quarter of the frond length with light brown scales at the base. Rhizome is thick, coarse, and scaly. Small sori are arranged between midvein and margin.

Many other *Dryopteris* species look similar—compare the innermost pinnules of the basal pinnae and look for persistently green fronds lying at the base.





## SENSITIVE FERN

*Onoclea sensibilis*

7

Often found in swamps, wet areas, marshes and low woods, this is a simple-cut triangular fern forming dense colonies. The sterile triangular frond is 8-40 inches tall, and is very light green and cut into approximately 12 pairs opposite simple pinnae. The fertile frond is 10-12 inches tall and narrow, with small, hard, beadlike divisions, which are at first dark green turning dark brown at maturity. The rachis of the sterile frond is smooth, winged, and glistening. The stipe is usually longer than the blade. The rhizome is stout, forking near the surface. The fiddleheads are a pale red.



# NORTHERN LADY FERN

*Athyrium filix-femina*

8

This is a very common, large, showy fern with lacy-cut fronds growing in circular clumps. Fronds are 1.5–3 feet long, lanceolate with very narrow pointed tips. Pinnae are short without a stalk. No hairs on the blade, and pointed teeth lack bristle tips. The pinnules cut to the midvein of the pinnae and are deeply toothed. The stipe is greenish red with scattered brown scales, and the base is often dark brown/black. Rhizome is very scaly, creeping, branching with many old stalks still attached. The sori are elongate, straight to horseshoe shaped. The spores are yellow.

The Silvery Glade Fern (*Deparia acrostichoides*) is a similar species, but have lobed pinnules rather than cut and toothed (see card 5).





## HAY SCENTED FERN

*Dennstaedtia punctilobula*

9

The Hay-Scented Fern forms extensive colonies in rows along their rhizomes. This species of fern is native to eastern North America, from Newfoundland west to Wisconsin and Arkansas, and south in the Appalachian Mountains to northern Alabama. It is a deciduous fern with fronds growing to 40–100 cm (rarely 130 cm) tall and 10–30 cm broad; the fronds are bipinnate, with pinnatifid pinnules about three times as long as broad. It occurs in damp or dry acidic soils in woods or open woods, from sea level up to 1,200 m altitude.

The common name “Hay-scented Fern” comes from the fact that crushing it produces an aroma of fresh hay. Hay-scented Ferns look similar to New York Ferns (*Thelypteris noveboracensis*), but those tend to grow in clumps of 3 or more fronds (see card 10 for the New York Fern).



# NEW YORK FERN

*Thelypteris noveboracensis*

10

This yellow-green mid-sized fern grows in colonies in woods and thickets, especially under gaps in the forest canopy, or on the edges of swamps and streams. The frond tapers at both ends and is about 8–25 inches long in tufts of 3 or more on a rhizome. The delicate blade tapers from the middle at both ends. They are finely hairy beneath. The pinnae are long-pointed, narrow, and cut nearly to midvein in rounded lobes. The rachis is green, pale, and often smooth. The rhizome is dark brown, widely creeping, and produces fronds in tufts. The sori are few, round, small, and near the margins.

The Hay-scented Fern (*Dennstaedtia punctobilia*) forms extensive colonies in rows along their rhizomes while New York Ferns tend to grow in clumps of three or more fronds. See card 9 for the Hay-Scented Fern.



Above: Northern Lady Fern pinnae (left) vs New York Fern.

# CLINTONS FERN

*Dryopteris clintoniana*

11

This fern is often found in wet areas of forests and wetland margins. The Clinton's fern is a fertile hybrid between Crested Fern (*Dryopteris cristata*) and Goldie's Fern (*D. goldiana*). (For Crested Fern, see card 12.) Its pinnae are twisted, so the leaf does not appear flat. The leaf blade is compound, divided into leaflets.



## CRESTED FERN

*Dryopteris cristata*

12

These shiny, bright green midsized ferns with horizontally-oriented pinnae are found in wet, swampy woods and open wetlands, alder thickets, and mossy fens and bogs. Erect fronds are 1–2 feet long and 3–5 inches wide, with widely spaced pinnae. Fertile fronds are tall and narrow. Sterile fronds are usually shorter, spreading, and evergreen. The blade narrows with the sides becoming almost parallel. Basal pinnae are obviously triangular and blunt. The rachis is green, stout, and scaly on the lower parts. The stipe is 10 inches long. The creeping rhizome is dark brown and stout. Sori are prominent halfway between midvein and margin.





## CINNAMON FERN

*Osmundastrum cinnamomeum*

13

This fern is a large, clump-forming fern with short-lived, wand-like cinnamon colored fertile fronds that last for a few weeks. Fronds are 20-60 inches long and mostly erect with a pinkish stipe. Fertile fronds wither and remain draped around the frond bases. Spores are green and short-lived. Pale tufts of wool are at the base of each pinnae. Rachis is smooth, green with pale wool on early season growth. Slender, oblong pinnae are cut deeply into lobes.

These clumps of ferns turn brilliant rusty red in fall. The cinnamon-colored fertile fronds last for a few weeks.



## INTERRUPTED FERN

*Osmunda claytoniana* L.

14

This is a large, clump-forming fern with withered, brown fertile structures that “interrupt” the entire fronds; these are actually modified fertile pinnae. Fronds can grow up to 5 feet long with a yellowish stipe. Fertile fronds are taller and more erect; sterile fronds are slender and arching. Pinnae are deeply cut into oval, semi-overlapping lobes. Rachis is smooth, green with a groove in front. Rhizomes are very stout and creeping with stubble remnants obviously visible in fall.

It’s very possible to confuse the Interrupted Fern with the Cinnamon Fern (*Osmundastrum cinnamomeum*), which can be found on card 13. Look first for at least one front in the clump that contains fertile pinnae. Also, note the ground conditions—if it’s relatively dry, it’s probably an infertile clump of Interrupted Fern.)

