

# IDENTIFYING NATIVE FERNS

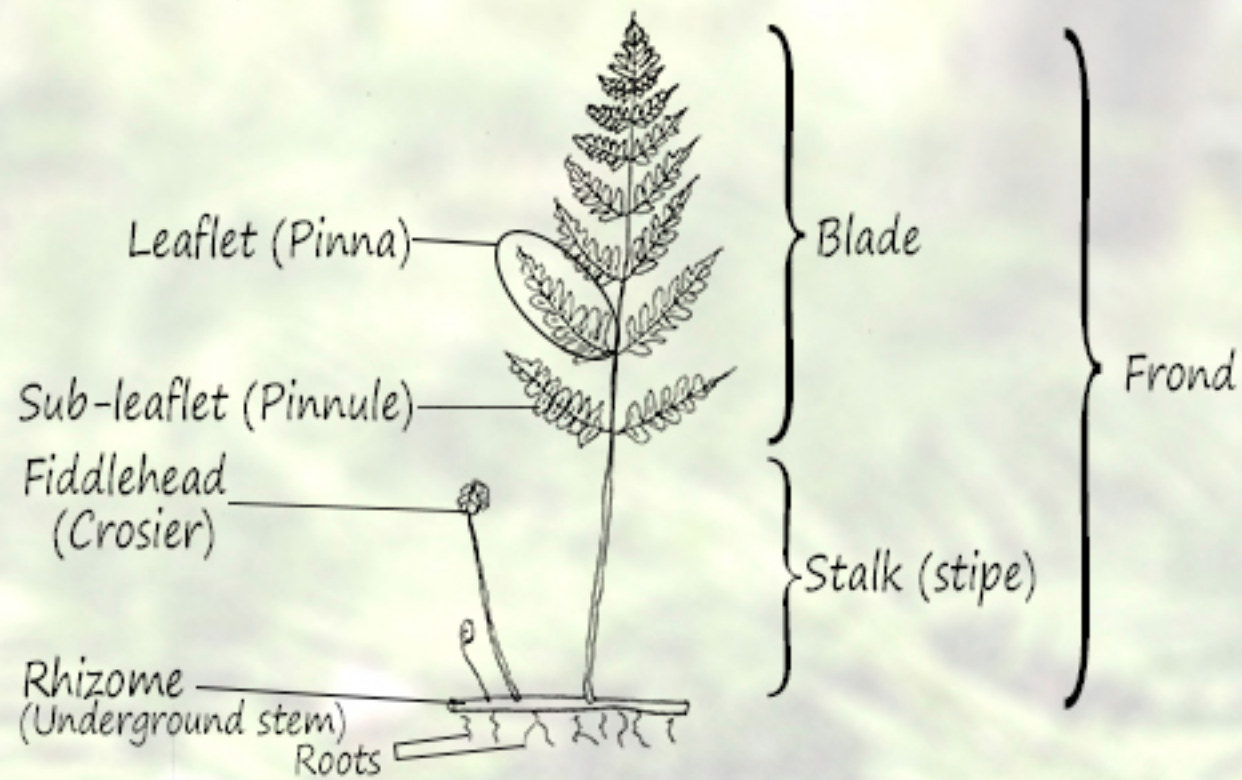
## A Basic Guide



For many years I walked the woods looking for flowers, ignoring the beauty of the ferns, dismissing them as too complicated to understand. This guide will help you begin to sort them out.



STEPHANIE BRUNDAGE



Ferns are an ancient group of plants that have a vascular system to carry water and nutrients and have generally adapted to growing in the shade. Unlike flowering plants, they reproduce by spores, not seeds. Their spores are carried on the underside of leaflets on fertile fronds. The visible spots, called sori, are masses of tiny spore cases. They first appear greenish or tan and ripen to a dark brown over the summer. Some of the ferns have fertile and sterile fronds that are similar and others have two very different types of fronds. The fronds emerge curled up, resembling a fiddlehead.

Sketches in this booklet are meant to show particular identifying characteristics of the species of fern depicted. They are not inclusive of all details and are not to scale.

All photos and drawings are by the author except the following:

- Interrupted Fern detail of spore cases
- Long Beech Fern frond

Courtesy of Alan Cressler, photographer and the Lady Bird Johnson Wildflower Center, Native Plants of North America database.

# ONE-STALK FERNS

## Rattlesnake Fern



These ferns have fertile and sterile fronds arising from a common stalk. Rattlesnake Fern has a stalk which branches high up while the related Grapeferns branch near or below the ground.



The Rattlesnake Fern grows up to 12x12" and emerges in the spring, fading in fall. It ranges across North America except the desert SW.

## Grapefern



### Southern



### Cutleaf



### Leathery



Grapefern fronds appear in the summer and persist through the winter. The Cutleaf species can grow as large as the Rattlesnake Fern but the other types have smaller fronds up to 6x6".

The sub-leaflets of Southern Grapefern are saw-toothed while those of Cutleaf have smooth or scalloped edges. They both have prominent veins. Leathery Grapefern has smooth edges and indistinct veins.

Look for Southern in the SE, Cutleaf in the East from North to South and Leathery across the Northern States and Canada.

# TALL PLUMES

With the exception of Bracken Fern these tall ferns carry their spores on special stalks (or sections of the main stalk) - easy to spot in spring but dried up and fallen off by mid-summer.



## Cinnamon Fern

Cinnamon Fern ranges from Canada to Florida and west to Eastern Texas in swamps and woodlands. Its clumps are 2-5 feet tall and 2-4 feet wide.



## Interrupted Fern

Interrupted Fern ranges from Canada to Northern Georgia and west to Missouri in cool damp woodlands. Its clumps are 2-4 feet tall and 3-4 feet wide.



# TALL AND BRANCHED

## Royal Fern

Royal Ferns are found in the same range as Cinnamon Ferns. They also grow in large clumps, even up to 6 feet tall in ideal conditions.



## Bracken Fern

Bracken Ferns are found all over the world, blanketing the ground by rhizomes. It grows rapidly, is quite invasive and is poisonous to livestock. It carries its leafy parts at an angle to the stalk, nearly horizontal. 3-4 feet tall.



# MEDIUM-SIZED

In this group of ferns, look more closely at the fronds. Lady Ferns are variable in shape but always have double rows of linear groups of spores on the underside of the leaflets. Hay-Scented and New York Ferns have round white spore cases.



## Lady Fern

Lady Ferns grow all over Canada and the US except South Florida. They have yellow-green or dark red stems and grow 1-3 feet tall in asymmetric clumps.



Lady



Yellow or brown spores on underside of leaflets

## Hay-scented

White spore cases on underside of leaflet



# DELICATE FERNS

## New York Fern

The fronds of New York Ferns have a distinctive shape with small leaflets extending almost to the ground. The leaflets are finely hairy on the underside. Their stems are green and slightly fuzzy. They grow 1-2 feet tall and spread by rhizomes, with fronds emerging in clumps. Their range is Eastern Canada and the United States south to Georgia and west to Oklahoma.



## Hay-Scented Fern

Hay-Scented ferns are described as smelling like new-mown hay. Their range is similar to that of New York Fern. They grow a bit larger at 1-3 feet tall and spread by rhizomes with fronds emerging in a line. Their stems are tan and fuzzy. Their fronds taper only slightly at the base and are covered on both sides by fine hairs.



New York

Spore cases on underside of leaflets



# TRIANGULAR

# FRONDS

## Sensitive Fern



Spore cases like chains of beads



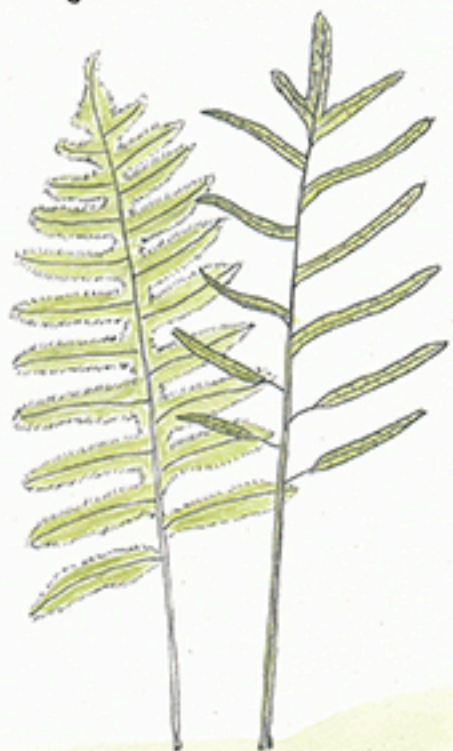
The name Sensitive comes from being sensitive to frost.

The Netted Chain Fern, which grows to 24" tall, resembles a small Sensitive Fern, which can grow as tall as 40". The Sensitive fern has wavy but smooth margins while the Netted Chain fern has tiny teeth along the edge.

Both ferns succumb to frost and have separate fertile fronds which persist through the winter. The Sensitive Fern is common in Canada and the US east of North Dakota and Texas and south to northern Florida. The Netted Chain Fern grows from Maine to southern Florida, predominately in the coastal and piedmont regions.

## Netted Chain Fern

Long spore cases midway between midline and edge of leaflet



## Broad Beechfern

The two species of Beechferns are quite similar. Look closely at the fronds and you will see wings along the stalks between the leaflets. On the Long Beechfern, the wings do not extend to the bottom two leaflets, which are angled more downward. The stalk of the Broad Beechfern is light green or tan while that of the Long Beechfern is brown or maroon. Both ferns grow 1-2 feet tall and spread slowly by rhizomes.



## Long Beechfern

Broad Beechfern is native to Maine and Southern Quebec, west to Minnesota and south to Louisiana and NW Florida. Long Beechfern has a more northern range across Canada and the Northern US and is rare south of Pennsylvania.



# EVERGREEN

# FERNS

## Christmas Fern



Old fronds lie flat in winter and die as new fronds emerge in spring.

Used as Christmas decorations by early settlers, this fern is common in forests across the Eastern US and Canada. It grows 1-2 feet tall, with the taller fertile fronds bearing spores on the top few pairs of leaflets. The stalk is yellow green with scruffy scales. The leaflets have "ears" on the upper side.

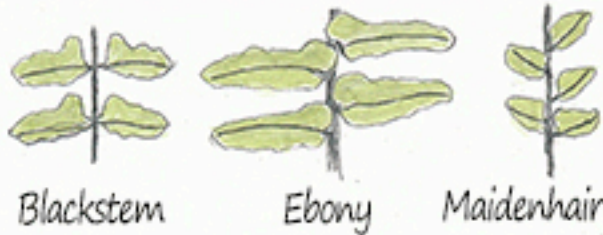


The Ebony Spleenwort is the largest of the dark stemmed spleenworts. It is common in rocky places across the Eastern US and Canada, west to Eastern Texas. The tall slender fertile fronds are up to 15 inches long and bear spores on the underside of most leaflets. The stalk is dark brown and shiny. The leaflets have ears on the upper side which overlap the stalk.

The short sterile fronds are evergreen while the fertile fronds die late in the winter.

## Ebony Spleenwort

Spleenworts with dark stems



## Rockcap Fern



Rockcap and Resurrection Ferns are 6-12 inches tall and emerge singly from rhizomes growing on or just below the surface. Both are common in the Eastern and Midwestern US.



Rockcap ferns are usually found on sheltered boulders and ledges from Canada to North Georgia. Their fronds and stalks are very smooth on both sides.

Resurrection ferns grow from New York south to Florida and are often found growing on rough-barked trees, old roofs and rotten wood. They have a rough scaly stalk and underside of the frond. The spore cases on the underside show as bumps on the upper surface of the leaflets.

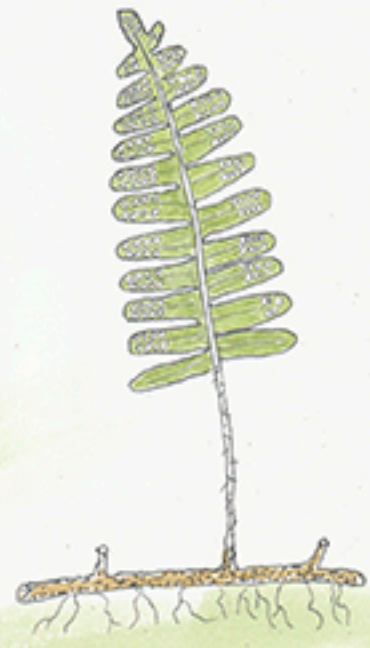


Rockcap



Resurrection

## Resurrection Fern



# UNIQUE

# FERNS

## Northern Maidenhair Fern

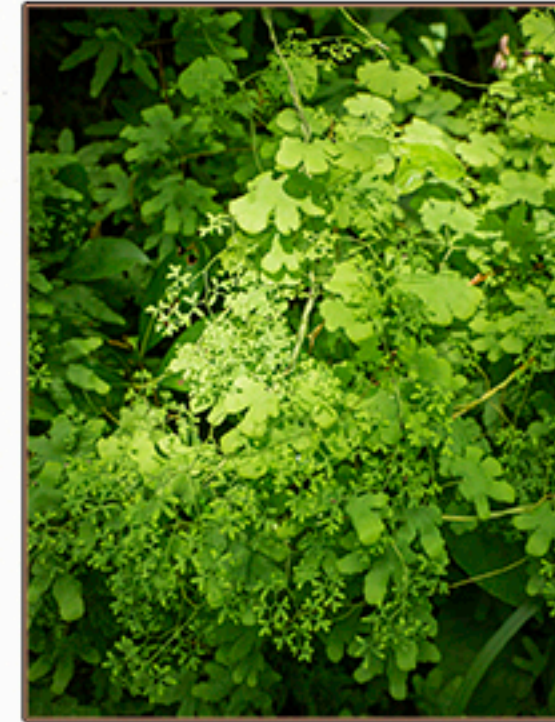
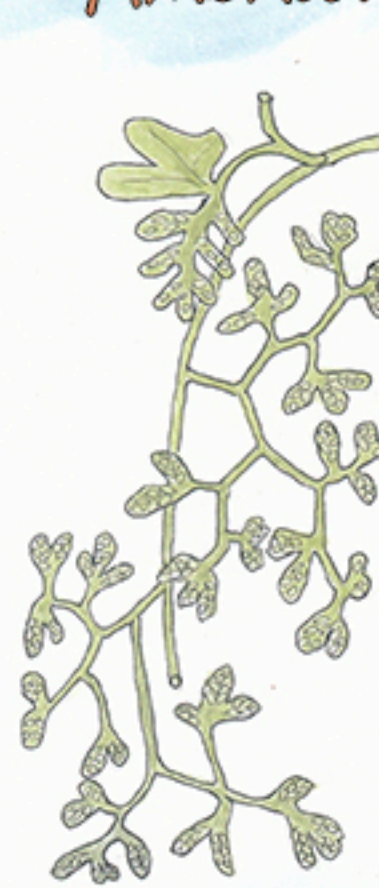


The Maidenhair Ferns are easily recognized by their unique forms and their shiny black stalks. The northern variety grows on rich moist woodland slopes from Canada to Georgia and west to Missouri. The southern variety prefers wet limestone rocks and river banks and ranges from Maryland south to Florida and west to California.

## Southern Maidenhair Fern



## American Climbing Fern



American Climbing Fern is found in moist woodlands and swamps from New Hampshire and Michigan south to Mississippi and Northern Florida. The frond grows as a vine atop other vegetation. Leaflets diminish in size along the length of the vine and transition to spore-bearing finger-like segments at the end.

This fern is easy to recognize from its form and growth habit and is the only native species of its kind in the US. However it should be distinguished from the Japanese Climbing Fern and the Small-leaf Climbing Fern which are very invasive and have been introduced into the Southern United States.



Japanese

Small-leaf

Spores are borne on tiny finger-like projections on the edges of the leaflets.



# WOODFERNS

## Marginal

## Goldie's

## Fancy



Both Goldie's and Fancy Woodferns have round spore cases located midway between the midvein and the margin.



Marginal Woodfern is noted for spore cases touching the margin of the sub-leaflet.

Most Woodferns are evergreen and form a medium to large cluster. Their fertile and sterile fronds are identical in form and size. Their stalks are covered with prominent scales, more numerous near the ground. These characteristics make them fairly easy to pick out in the woods. The bad news is that there are numerous species and where two species co-exist they are likely to form hybrids. The three listed here are the most common of this group.

Marginal Woodfern is leathery and evergreen and grows in clumps among roots and rocks. Its range is Canada to Georgia and west to Oklahoma. Its fronds are up to 40" long with rounded sub-leaflet margins.

Goldie's Woodfern is deciduous and grows in clusters in moist woods and swamps. Its range is Canada to the mountains of Georgia and west to Missouri. Its fronds are up to 47" long, curving abruptly at the tip, and have leaflet margins with rounded tips. Scales are long with dark centers and pale borders.

Fancy Fern is evergreen and grows in circular clusters in moist or dry woods. Its range is Canada to North Carolina and west to Missouri. Its fronds are up to 35" long with lacy-cut sub-leaflets with toothed, bristle-tipped margins.

## Species List

### One-Stalk Ferns

Cutleaf Grapefern  
Leathery Grapefern  
Rattlesnake Fern  
Southern Grapefern

Botrychium dissectum  
Botrychium multifidum  
Botrychium virginianum  
Botrychium biternatum

### Tall Ferns

Bracken Fern  
Cinnamon Fern  
Interrupted Fern  
Royal Fern

Pteridium aquilinum  
Osmunda cinnamomea  
Osmunda claytoniana  
Osmunda regalis

### Delicate Ferns

Hay-scented Fern  
Lady Fern  
New York Fern

Dennstaedtia punctilobula  
Athyrium filix-femina  
Thelypteris noveboracensis

### Triangular Fronds

Broad Beechfern  
Long Beechfern  
Netted Chain Fern  
Sensitive Fern

Phegopteris hexagonoptera  
Phegopteris connectilis  
Woodwardia areolata  
Onoclea sensibilis

### Evergreen Ferns

Blackstem Spleenwort  
Christmas Fern  
Ebony Spleenwort  
Maidenhair Spleenwort  
Resurrection Fern  
Rockcap Fern

Asplenium resiliens  
Polystichum acrostichoides  
Asplenium platyneuron  
Asplenium trichomanes  
Pleopeltis polypodioides  
Polypodium virginianum

### Unique Ferns

American Climbing Fern  
Japanese Climbing Fern  
Northern Maidenhair Fern  
Small-leaf Climbing Fern  
Southern Maidenhair Fern

Lygodium palmatum  
Lygodium japonicum  
Adiantum pedatum  
Lygodium microphyllum  
Adiantum capillus-veneris

### Wood Ferns

Fancy Wood Fern  
Goldie's Wood Fern  
Marginal Wood Fern

Dryopteris intermedia  
Dryopteris goldiana  
Dryopteris marginalis



This beginner's guide skims the surface, picking out identifying characteristics of only the most common ferns.

For more information check out a good book or website and buy a 5-10x magnifier for examining fine details of the hairs and spore cases. These are only the references I have personally used.

Fern Finder, a Guide to Native Ferns of Central and Northeastern United States and Eastern Canada, Anne and Barbara Hallowell, 2001  
Pocket sized key with line drawings and range maps.

Field Guide to the Ferns and Other Pteridophytes of Georgia by Lloyd H. Snyder and James G. Bruce, 1986, 2003 available from the University of Georgia Press, [ugapress.org](http://ugapress.org), wonderful large line drawings.

Identifying Ferns the Easy Way, A Pocket Guide to Common Ferns of the Northeast by Lynn Levine and Briony Morrow-Cribbs 2019 Excellent line drawings.

NameThatPlant.net, a database of Native and Naturalized Plants of the Carolinas and Georgia, Janie Marlow, SC Native Plant Society Excellent photographs, many close-ups and references.

Native Plants for Georgia, Part II Ferns, University of Georgia Extension Service, Bulletin 987-2, <https://extension.uga.edu/publications>. Photos, line drawings, tips on landscape use. Down-loadable PDF.

Native Plants of North America Database, Lady Bird Johnson Wildflower Center, [wildflower.org](http://wildflower.org)  
Lots of photographs, covers all of US and Canada

Peterson Field Guide to Ferns And Their Related Families, Northeastern and Central North America, Second Edition, by Boughton Cobb and Cheryl Lowe, New England Wildflower Society 2005 Excellent photographs and line drawings.

