

REPRINT FROM

The Natural History of the Toronto Region

ONTARIO, CANADA

EDITED BY

J. H. FAULL, B.A., PH.D.

Associate Professor of Botany, University of Toronto



TORONTO

PUBLISHED BY THE CANADIAN INSTITUTE

1913

~~Cash
Ran. Lucy, T. J.~~

FER

S

Owing
in and ab
atmospher
plants are
on the wh
localities
conditions
nificant sp
part of the
for exampl
six or seve
part of the
by a shade
duce frond
both these
There are
vince whe
such as at
are chiefly
Purple Pe



FERN COLONY, OSMUNDA CLAYTONIANA.

J. H. Faull.

Photo by L. H. Graham,

CHAPTER VII.

FERNS AND FERN ALLIES.

By

T. J. IVEY, M.A.,

Science Master, Harbord Collegiate Institute.

OWING to the sandy or heavy nature of the soil in and about Toronto, and the comparatively dry atmosphere, the representatives of this group of plants are not numerous, and the individual species, on the whole, are rather medium-sized. In certain localities throughout the province, however, where conditions of soil and moisture are suitable, magnificent specimens are often found. In the northern part of the province specimens of the Bracken fern, for example, have been found to attain a height of six or seven feet, and in one locality in the eastern part of the province the Boulder fern, where protected by a shaded limestone cliff, has been observed to produce fronds five feet in length; the average size for both these being perhaps about two to three feet. There are many localities, too, throughout the province where typical rock-loving ferns are numerous, such as at Niagara and Credit Forks, where the rocks are chiefly calcareous. Here occur such species as Purple Pellaea, Narrow-leaved Spleenwort, Maiden-

QK525

.7

05

I94

1913

P***

NATURAL HISTORY, TORONTO REGION

hair Spleenwort, and Goldie's fern. There are also certain northern forms characteristic of the igneous rocks of the northern part of the Province. Amongst these we have the New York fern, Woodsias, Fragrant Shield fern, and several Lycopodiums. Certain forms, again, which are quite common in other countries are quite local and rare in this, as is the case with the male fern, Hart's Tongue, and Wall Rue.

The following list includes the more commonly occurring Pteridophyta, as well as a few that are quite local and rare.

POLYPODIACEAE.

1 **Adiantum pedatum**, L. (Maidenhair). Fairly common in secluded parts of rich woods.

2. **Polypodium vulgare**, L. (Common Polypody). Common in the crevices of limestone rocks and at the foot of granite cliffs at Niagara Glen, Credit Forks, and throughout the province generally.

3. **Phegopteris polypodioides**, Fée (Long Beech-fern). Rather rare on shaded bank at Highland Creek, but quite common in the northern part of the province, where *Phegopteris hexagonoptera* (Broad Beech-fern) is reported to occur with it occasionally (Shaw); also rare in rich woods at Inglewood, Ont. (White).

4. **Phegopteris dryopteris**, Fée (Oak Fern). Universally common in rich woods.

REGION
are also
igneous
Amongst
as, Fra-
s. Cer-
in other
s is the
d Wall
nmonly
hat are

Fairly
pody).
at the
Forks,

Beech-
hland
of the
Broad
nally
Ont.

Uni-

FERNS AND FERN ALLIES

5. **Pteris aquilina**, L. (Brake or Bracken). Common everywhere, mostly in open, sandy ground.
6. **Pellaea atropurpurea**, Link. (Purple-stemmed Cliff-brake). Occurs extensively at Niagara Glen and at Credit Forks and in many other localities, usually high up in crevices of limestone cliffs.
7. **Cryptogramma stelleri**, Prantl. (Slender Cliff-brake). Reported rare at Credit Forks on the face of limestone cliffs (White).
8. **Woodwardia virginica**, Sm. (Virginia Chainfern.) Apparently very local. There is a large colony of it near Snelgrove, in Peel County (White). Farther north it occurs more commonly in sphagnum bogs and marshes near Port Sydney, Muskoka, and other localities.
9. **Asplenium viride**, Huds. (Green Spleenwort). Reported rare in crevices of limestone rocks at Credit Forks (White).
10. **Asplenium trichomanes**, L. (Maidenhair Spleenwort). Common on moss-covered logs and limestone rocks at Niagara Glen and Credit Forks.
11. **Asplenium angustifolium**, Michx. (Narrow-leaved Spleenwort). Very local. Occurs with **Aspidium goldeanum** and **Asplenium acrostichoides** at Niagara Glen and at Madoc in eastern Ontario, in rich, damp woods. Reported also rare in low woods at Credit Forks (White), and from the Don Valley, Toronto.
12. **Asplenium acrostichoides**, Sw. (Silvery Spleenwort). Although common in northern Ontario, near

NATURAL HISTORY, TORONTO REGION

Toronto it appears to be quite rare. In southwestern and eastern Ontario it is also fairly common.

13. **Asplenium filix-femina**, Bernh. (Lady Fern). Very common and varied in form according to habitat and locality. Occurs in moist woods.

14. **Camptosorus rhizophyllus**, Link. (Walking Fern). On moist moss-covered limestone rocks at Niagara Glen. In similar habitat at Credit Forks (White). Also from several other localities in Ontario.

15. **Polystichum acrostichoides**, Schott. (Christmas Fern). Common generally in rich rocky woods.

16. **Aspidium thelypteris**, Sw. (Marsh Shield Fern). Common everywhere from south to north along the grassy borders of marshes.

17. **Aspidium noveboracense**, Sw. (New York Fern). Reported rare in low woods from Peel County (White). Common northward.

18. **Aspidium marginale**, Sw. (Evergreen Wood-fern). One of the most common ferns, occurring in open rocky woods.

19. **Aspidium goldianum**, Hook. (Goldie's Fern). Occurs in the Niagara peninsula, at Niagara Glenn and in eastern Ontario, in low rich woods in calcareous soil.

20. **Aspidium boottii**, Tuckerm. (Boott's Shield-fern). Several plants found at Madoc, Ont., at the foot of a limestone cliff in shaded situation. Here it occurred with *Aspidium spinulosum intermedium* and *Aspidium marginale*.

21. fern).

swamp

22. Eaton.

At Yo
ern Or

23. Eaton.
occurri

24. One of
commo
northw

25. Widely
in forn
exposed

26. This is
rocks.

27. 1
Fern).
growing
shaded
wood in

28. the var.
fields ai

10

EGION
western
Fern).
to habi-
Valking
ocks at
Forks
in On-
Christ-
woods.
Shield
north
York
Peel
Wood-
ng in
ern).
Henn
cal-
ield-
t the
Here
lium

FERNS AND FERN ALLIES

21. **Aspidium cristatum**, Sw. (Crested Shieldfern). Quite a common fern along the borders of swamps and marshes, in grass.
22. **Aspidium cristatum**, var. *clintonianum*, D. C. Eaton. Found quite commonly in several localities. At York Mills, Niagara Glen, in northern and eastern Ontario in more shaded habitat than the species.
23. **Aspidium spinulosum**, var. *intermedium*, D. C. Eaton. This is perhaps our most common fern, occurring in rich woods everywhere.
24. **Cystopteris bulbifera**, Bernh. (Bladder Fern). One of the most common swamp ferns. It is very common in southern Ontario, but is rare locally northward.
25. **Cystopteris fragilis**, Bernh. (Brittle Fern). Widely distributed throughout Ontario, and varied in form and habitat; occurring in some places on exposed rocks, but mostly in shade.
26. **Woodsia ilvensis**, R. Br. (Rusty Woodsia). This is a typical northern fern, occurring on secluded rocks.
27. **Dicksonia punctilobula**, Gray (Hay-scented Fern). This is also a common northern species, growing around rocks in the open. Occurs also in shaded situations near Madoc. Reported from Inglewood in rocky woods (White).
28. **Onoclea sensibilis**, L. (Sensitive Fern), with the var. *obtusilobata* is very common in low, grassy fields and thickets throughout Ontario.

4

NATURAL HISTORY, TORONTO REGION

29. **Onoclea struthiopteris**, Hoffm. (Ostrich Fern). This is one of our best known ferns, growing mostly in moist, open situations. Under favourable conditions it reaches a height of four or five feet.

OSMUNDACEAE.

1. **Osmunda regalis**, L. (Royal Fern or Flowering Fern). Common northward along the borders of streams and ponds, also throughout Ontario locally.

2. **Osmunda claytoniana**, L. (Interrupted Fern). Near Toronto, in Ashbridge's "Wood," High Park, and along the Humber River. Distributed throughout Ontario.

3. **Osmunda cinnamomea**, L. (Cinnamon Fern). This species is often found in the same localities as the preceding, but usually in more moist and shaded localities.

OPHIOGLOSSACEAE.

1. **Ophioglossum vulgatum**, L. (Adder's-tongue). Very rare near High Park, Toronto. Near Port Sydney, Muskoka, Ont., it occurs in long grass in damp ground, in shaded situation.

2. **Botrychium lunaria**, Sw. (Moonwort). This has been reported from Northern Ontario.

3. **Botrychium simplex**, Hitchcock (Little Grapefern). Found in one locality in open woods near High Park, Toronto. Also reported frequent on upland pastures in Peel County (White).

REGION

FERNS AND FERN ALLIES

(Ostrich ferns, growing favourably five feet.

Flower borders locally.

Fern).
gh Park, through-

Fern).
lities as
l shaded

ongue).
r Port
grass in

This

Grape-
ls near
ent on

4. **Botrychium lanceolatum**, var. *angustisegmentum*, Pease and Moore (Lance-leaved Grape-fern). Found in one locality near Port Sydney, Muskoka, Ont. Also reported from Peel Co. (White).

5. **Botrychium ramosum**, Aschers. Occurs with *Botrychium lanceolatum* var. in rich woods.

6. **Botrychium obliquum**, Muhl. Common northward in open grassy fields. Also from Peel Co. (White).

7. **Botrychium ternatum**, var. *intermedium*, D. C. Eaton. Large specimens of this plant occur rarely in High Park, Toronto, in open sandy soil.

8. **Botrychium virginianum**, Sw. (Rattlesnake Fern). This is the most common of the Botrychiums in rich woods throughout Ontario.

EQUISETACEAE.

1. **Equisetum arvense**, L. (Field Horsetail). Common in wet sandy soil everywhere.

2. **Equisetum sylvaticum**, L. (Wood Horsetail). Common in damp woods, in light soil near Toronto; also in many other localities throughout the province.

3. **Equisetum hyemale**, L. (Scouring-rush). Occurs around Toronto on damp hillsides and ravines.

4. **Equisetum fluviatile**, L. (Pipes or Swamp Horsetail). Very common in muddy secluded ditches, amongst grass or in shallow water. Found along the Humber River, Toronto.

NATURAL HISTORY, TORONTO REGION

5. **Equisetum variegatum**, var. *jesupi* (?). This occurs locally, but is quite common in certain localities—at Toronto Island, along Humber River, Toronto, and at one locality in Eastern Ontario near Madoc. Found in damp sand.

6. **Equisetum scirpoides**, Michx. Appears to be the second most common Equisetum around Toronto. It is to be found growing on moist mounds in low woods.

LYCOPODIACEAE.

1. *Lycopodium selago*, L. This species, as far as reported, has been found only in Northern Ontario in low rocky woods.

2. **Lycopodium lucidulum**, Michx. (Shining Club-moss). Frequent in High Park, Toronto, but rapidly disappearing.

3. *Lycopodium inundatum*, L. (Bog Club-moss). Found mostly northward along the boggy shores of lakes and ponds.

4. *Lycopodium annotinum*, L. (Stiff Club-moss).
Reported common in woods, Peel Co. (White); also
common northward.

5. *Lycopodium obscurum*, var. *dendroideum*, D.C. Eaton (Ground Pine). Found occasionally in rich woods. Common northward.

6. *Lycopodium complanatum*, L. (Ground Pine or Trailing Christmas-green). One plant found at Credit Forks, Ont. (White). Common northward.

EGION
). This
n locali-
ver, To-
io near

s to be
ronto.
in low

far as
ntario

Club-
t rap-

loss).
es of

loss).
also

D.C.
rich

e or
at
rd.

FERNS AND FERN ALLIES

1. This
n locali-
ver, To-
io near

s to be
ronto.
in low

far as
ntario

Club-
t rap-

loss).
es of

loss).
also

D.C.
rich

e or
at
rd.

7. **Lycopodium tristachyum**, Pursh. A large bed in dry shallow soil found near Port Sydney, Muskoka, Ont.

8. **Lycopodium clavatum**, L. (Common Club-moss), also the variety *monostachyon*, Grev. and Hook, occurs in several localities northward. Species reported rare in one locality, Peel Co. (White).

SELAGINELLACEAE.

1. **Selaginella rupestris**, Spring. Common in several localities throughout Ontario on dry rocks.

2. **Selaginella apus**, Spring. This species also occurs locally throughout Ontario, in damp grass, often along the borders of lakes.

I SOETACEAE.

1. **Isoetes echinospora** var. *braunii*, Engelm. (Braun's Quillwort). Found in one locality in sandy bottom of lake and river near Port Sydney, Muskoka, and very locally elsewhere in the Archaean district.

REFERENCES.

Gray's New Manual of Botany (Robinson & Fernald), 7th ed.

Britton and Brown. An Illustrated Flora.

Clute. Our Ferns in their Haunts.

CHAPTER VIII.

MOSSES AND LIVERWORTS.

By
G. H. GRAHAM, M.A.

THE Geological Survey of Canada has published comprehensive lists of the Bryophyta—Part VI on the Mosses, VII including the Liverworts—and these contain a good representation of Southern Ontario forms, and especially of the Lake Erie and Eastern Lake Ontario Districts. As Toronto lies between the two it probably comprises in its flora a majority of the species found in both. If this be the case the following list contains little more than a third of the mosses and liverworts growing within easy collecting distance of the city.

The author is under special obligation to Professor Coleman for the list of interglacial mosses from Scarborough and the Don.

HEPATICAE—Liverworts.

Family Ricciaceae.

Riccia fluitans, L. In ponds. Near High Park and in Rosedale Ravine, Toronto.