

**AN INTRODUCTION**  
**to**  
**NOVA SCOTIAN MOSSES**

*by*

**J. S. ERSKINE**

Central Kings Rural High School, Cambridge, Nova Scotia



Reprinted from *Journal of Education*, December, 1956  
Department of Education  
Halifax, Nova Scotia

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J. S. ERSKINE

Central Kings Rural High School, Cambridge, Nova Scotia

Illustrations by W. B. SCHOFIELD

Central Kings Rural High School, Cambridge, Nova Scotia

THERE are two approaches to a knowledge of mosses, as to that of other groups containing many species. The best is to have a book which gives all the species and has "keys" to guide one through the maze of detail. You then look up each specimen, chasing it through the keys until finally a name is found, and the specimen is then compared with the illustration. If they do not fit, the work must be done again and again. The only book that covers our Nova Scotian mosses completely is Grout's *Moss Flora of North America* with the companion volume *Mosses* for illustrations; these can be obtained for about forty dollars. The second approach is to have a guide to the very common species, with illustrations, and to collect and compare until these become familiar. This leads to many mistakes in detail, and the true enthusiast will want to go deeper and must then revert to the first approach which will now be much easier to handle than if begun from the absolute zero of knowledge. Of course, better yet is to take your troubles to someone who knows already, but those who know mosses are few and far between.

In Nova Scotia some twenty-five species make up about ninety per cent of the moss population. This article is an attempt to make the names of these available to those who wish a superficial knowledge, but it should be kept in mind that the remaining ten per cent is divided between some four hundred species not included here. Sometimes many nearly related mosses are common. In that case I have tried to indicate the fact but have given only one species to the list. I offer some makeshift English names for the use of those who are allergic to Latin, but it should be remembered that these names are entirely useless, since they have not been standardized.

In order to see detail, a hand-lens will be needed by most people. The best way to begin to learn is to make a collection, preferably of fruiting plants. Mosses do not need to be pressed or protected against insects. Old envelopes house them adequately, and notes as to where and when the mosses were found should always be written on the envelopes.

(The illustrations are numbered according to the numbering of the names in the list.)

## WOODLAND MOSSES

1. *Hypnum splendens* (Hedw.) Bry. Eur. (Smooth Fern-moss)  
Grows on humus in woods, leaves smooth to the touch, new leaves springing from midrib of old leaves, fruits uncommon.
2. *Thuidium delicatulum* (Hedw.) Mitt. (Rough Fern-moss) On humus or soil. A rich green unless faded, rough to the touch, fruiting commonly. Many mosses are branched pinnately (in herringbone pattern) but only this and the above are branched and rebranched.

3. *Pleurozium Schreberi* (Brid.) Mitt. (Schreber's Moss) Common ground-cover in spruce woods; once pinnate, leaves smooth, without midrib, stems red, capsules small and curved, fruiting rarely except in marshes.

4. *Rhyidiadelphus triquetrus* (Hedw.) Warnst. (Shaggy Moss) Under spruce in shaggy masses, rarely fruiting. When it comes out into the open, it is likely to be smooth and pinnate. Leaves have a strong double midrib.

5. *Leucobryum glaucum* (Hedw.) Schimp. (White Moss) A common pincushion moss in woods and swamps. The leaves are whitish when dry and show no midrib, since they are all midrib. Fruits small and uncommon.

6. *Dicranum scoparium* Hedw. (Broom-moss) A common pincushion moss of all woods. Leaves brushed into a half-curl at the tip, fruits common on long stems. There are many related species. (The illustration is of *D. majus* Sm. which has several fruits whereas *D. scoparium* has only one.)

7. *Ulotia crispata* (Hedw.) Brid. (Tree-trunk Moss) Tufts of bright green on the trunks of deciduous trees, with yellow ribbed capsules erect on short stems hidden among curly green leaves. There are many related species in such situations.

8. *Mnium hornum* Hedw. (Bank Moss) Abundant on banks of streams in woods. A large moss, sometimes reddish, with long-oval toothed leaves with large cells visible under the hand-lens.

#### BOG MOSSES

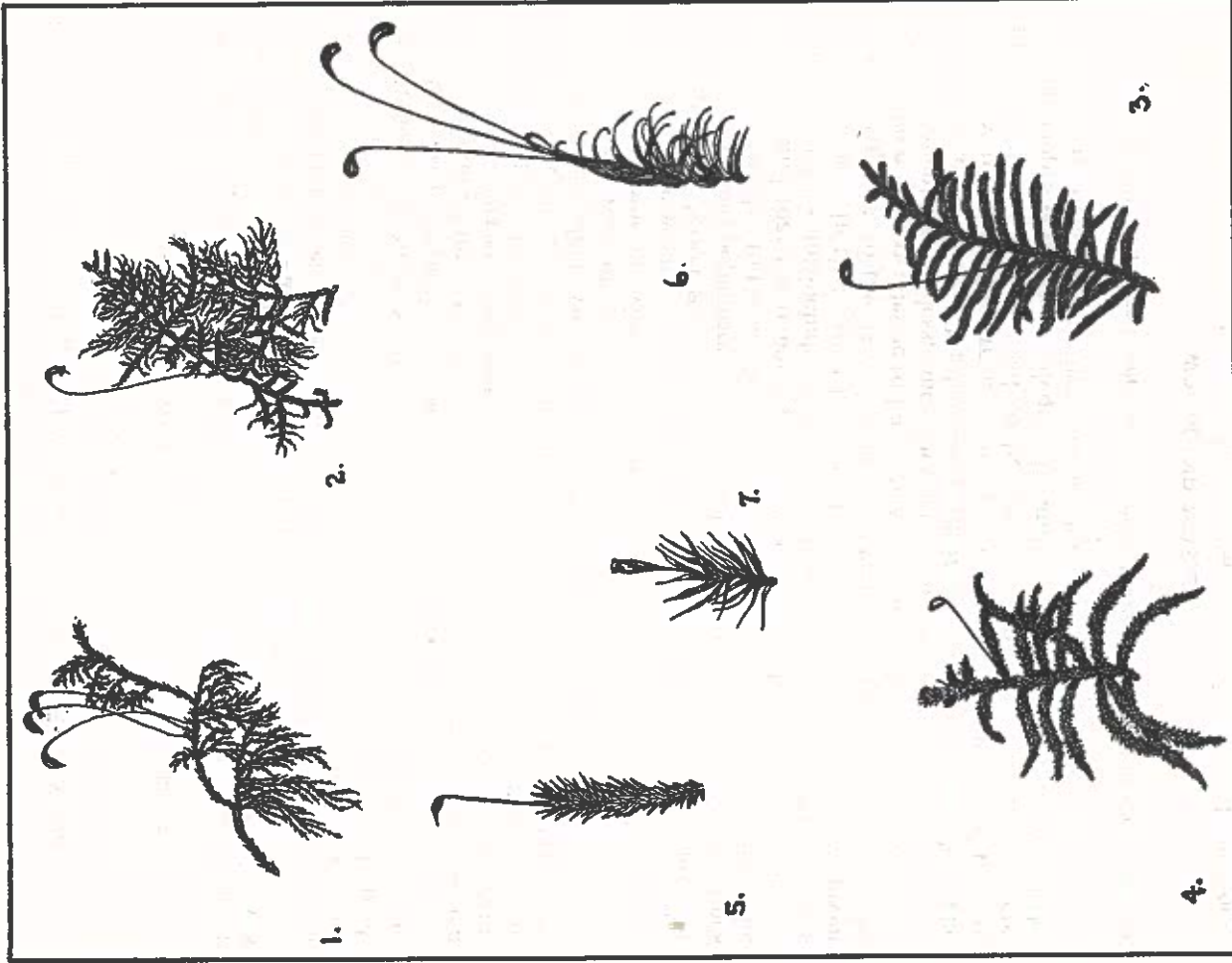
9. *Sphagnum magellanicum* Brid. (Spoon-leaved Peat-moss) In bulk there is more sphagnum moss than all other kinds put together, but most of it is in bogs. The plants look more white than green and often have yellow, pink and brownish tints. If the leaves are two-thirds as broad as long, suspect this group, in which three other species are almost as common. (The illustration shows *Sphagnum papillosum*.)

10. *Sphagnum capillaceum* (Weiss) Schrank. (Narrow-leaved Peat-moss) This group makes up the high bogs and tints them from white to pink to brown. There are several species very difficult to distinguish. The leaves are comparatively narrow and end in a few toothlike cells and never in a spoonlike lip.

#### SWAMP MOSSES

11. *Aulacomnium palustre* (Web. & Mohr) Schwaegr. (Swamp Moss) Very common on sour wet soil. The tips of the plants are usually yellow-green, the older parts blackish. Leaves rough, cells short, midrib strong. Fruits common, curved and ribbed; false fruits with a cluster of tiny leaves at top also common.

12. *Brachythecium salebrosum* (Web. & Mohr) Bry. Eur. (Dragonhead Moss) Common in wet places and on roots of trees. Yellowish or whitish green creeping stems; leaves with long cells and midrib; fruiting capsules common, short, thick, curved and blackish on long stems. There are many related species with similar fruits.



13. *Climacium dendroides* (Hedw.) Web. & Mohr. (Tree-moss) In wet soil, pastures and swamps. This moss grows erect and throws out horizontal branches like a miniature tree. It resembles only one rare moss and rarely fruits.

#### MOSES COMMONLY IN GRASS

14. *Ceratodon purpureus* (Hedw.) Brid. (Red Moss) Perhaps our most conspicuous weed-moss. It grows in patches on lawns, on rocks and trees; the stems of its unripened fruits make crimson patches in the winter. In spring it develops its fruits, which are usually curved and ribbed.

15. *Polytrichum commune* Hedw. (Hair-cap Moss) Making hummocks in pastures, at the edge of boulders and in marshes, even in rocky woods. A big moss with coarse straight leaves and tall stems with capsules like boxes with four flat sides. There are two nearly related species only less common: *juniperinum* with inrolled edges on the leaves, and *piliferum*, smaller with a long white hair at the tip of every leaf.

16. *Atrichum undulatum* (Hedw.) Beauv. (Wavy-leaved Moss) Common on lawns, in pastures. Wavy-edged leaves with small double spines, long blackish capsules with long-beaked lids.

17. *Mnium cuspidatum* Hedw. (Broad-leaved Moss) On lawns, in woods. Leaves nearly as broad as long with large short cells, leaves often crumpled, toothed in upper half. There are several related species nearly as common.

18. *Dicranella heteromalla* (Hedw.) Schimp. (Velvet Moss) Very small plants forming a velvety turf about the roots of trees, especially on less acid soils. A multitude of asymmetric capsules on bright yellow stems. A few related species.

19. *Pohlia nutans* (Hedw.) Lindb. (Nodding Moss) Wet poor sour soil anywhere. The leaves are longish and pointed, the capsules large and hang mouth downward.

#### ROCK MOSES

20. *Grimmia apocarpa* Hedw. (Rock Moss) Common on rocks and very poor soil. Grows in short masses with a tawny tinge to the green, especially in spring when it is covered with small stemless red-mouthed fruits. It has many relatives.

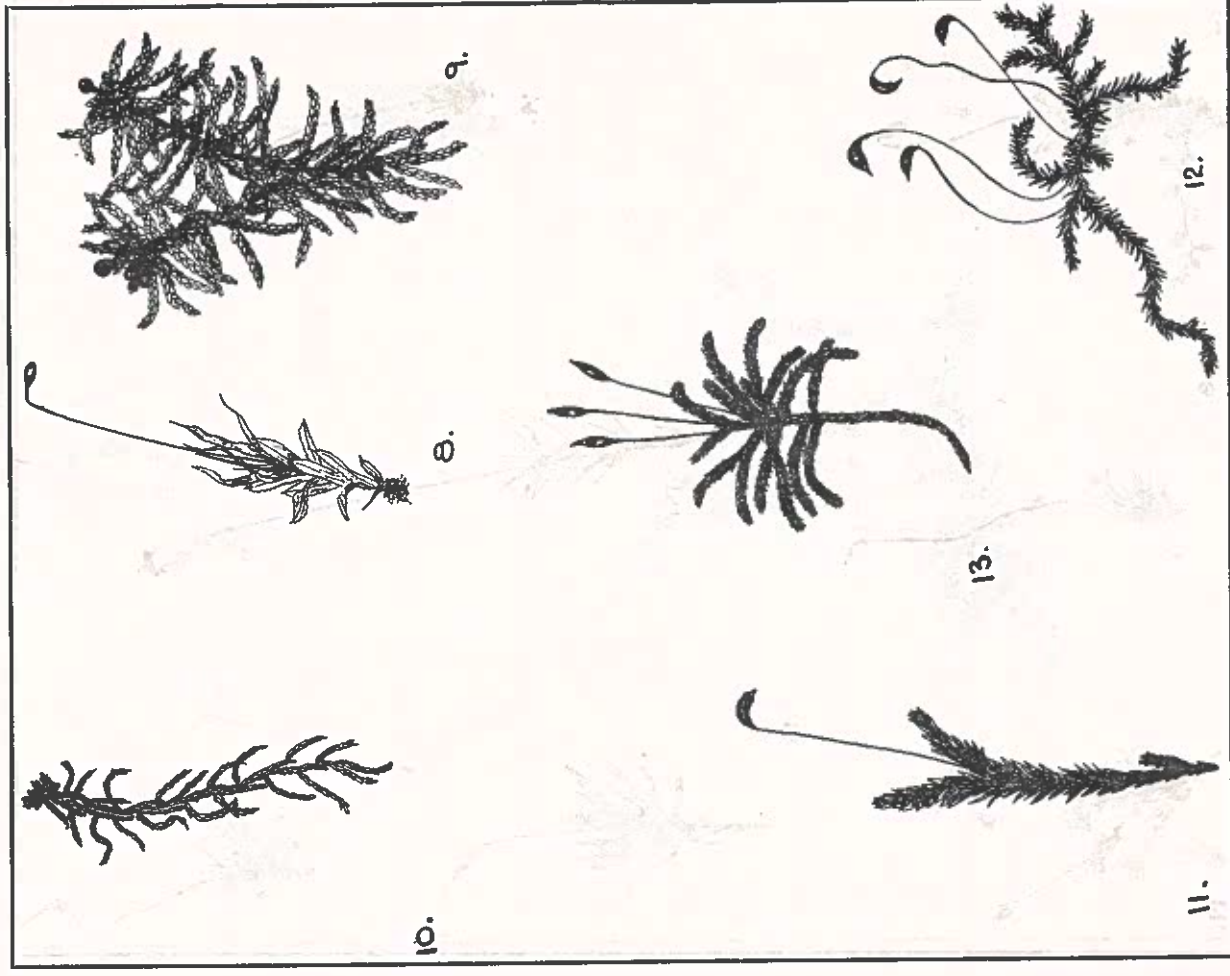
21. *Hedwigia ciliata* Hedw. (Grey Boulder-moss) Creeping over boulders; grey and stringy when dry, but fluffing out into deceptive green when wet.

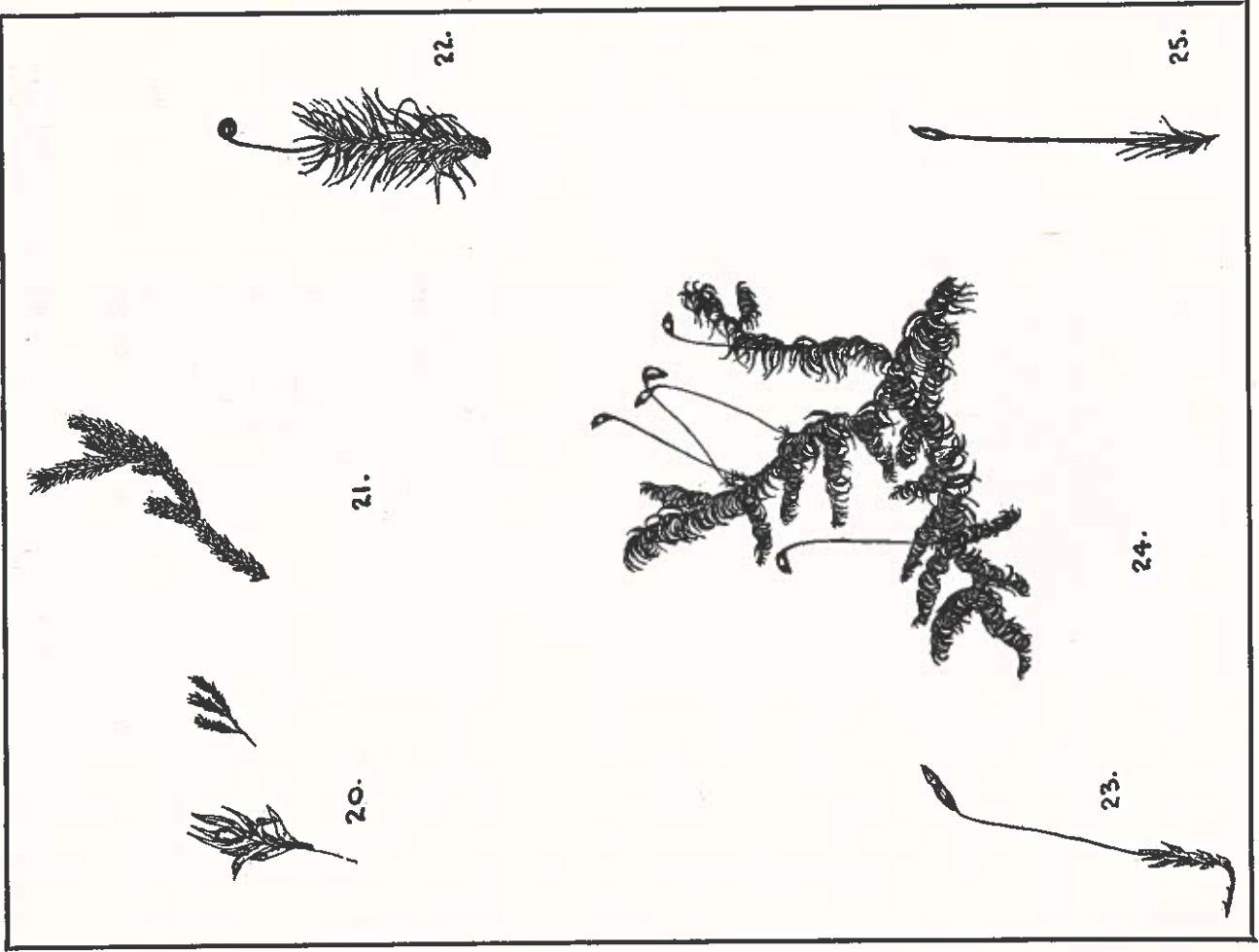
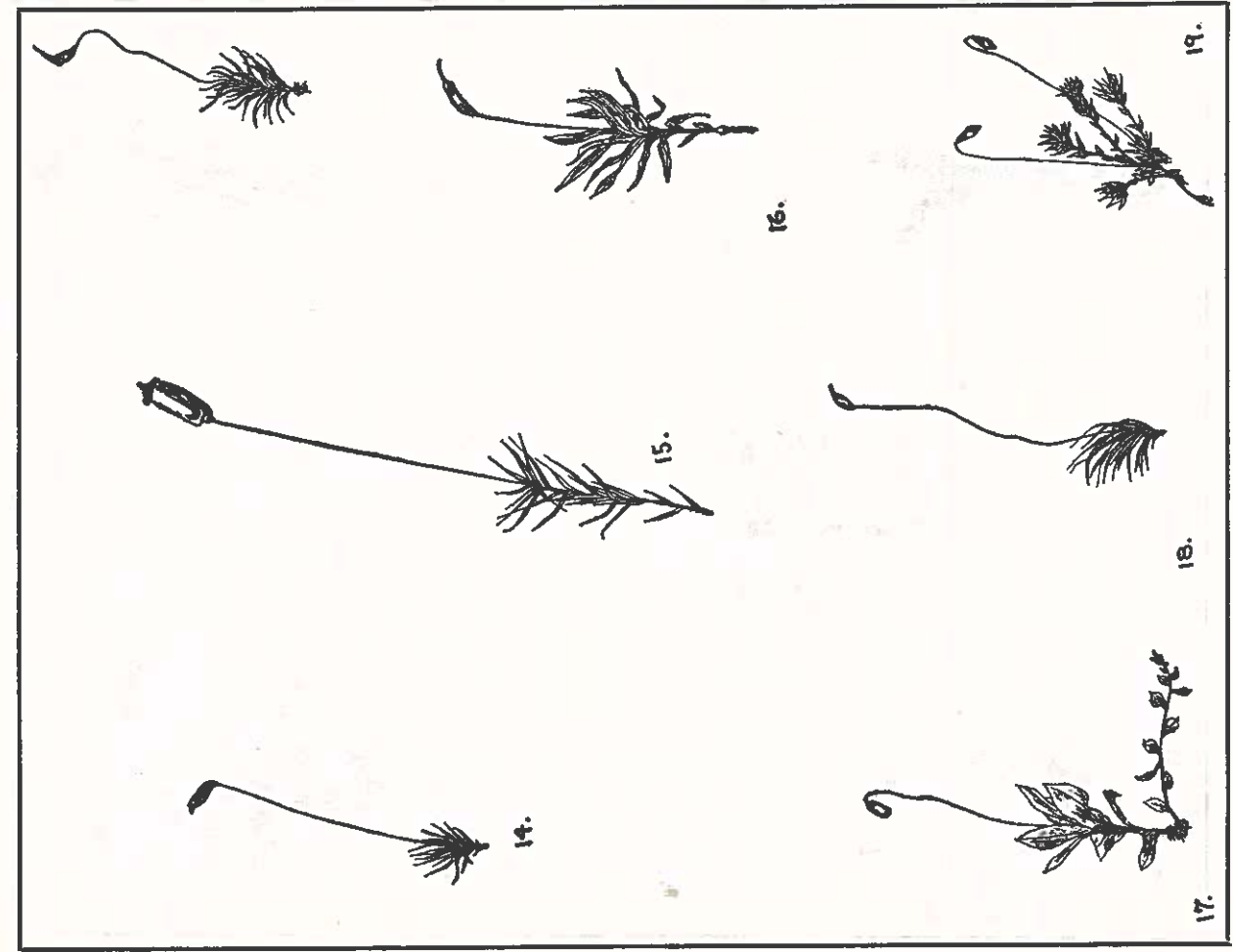
22. *Barthamia pomiformis* Hedw. (Apple Moss) Tufts of woolly green on cliffs; fruits globular and ribbed.

#### ROTTEN-WOOD MOSES

23. *Tetraphis pellucida* Hedw. (Four-toothed Moss) On rotten wood anywhere, usually holding up cups of roundish leaves and having long fruits, the mouth of which is closed by four stiff teeth.

24. *Drepanocladus uncinatus* (Hedw.) Warnst. (Curly-leaved Moss) On rotten wood. The narrow leaves are curved into a complete circle and have a strong midrib. Capsules curved and contracted below mouth. Watch out for the midrib of leaf, as *Hypnum*s are similar but have no midrib.





**BARE SOIL MOSSES**

25. *Ditrichum pusillum* (Hedw.) E. G. Britton. (Roadside Moss)  
Making a yellow fur on the shoulder of roads in acid soils. Very small  
erect plants with a long erect capsule on yellow stem.

**AIDS TO FINDING A MOSS IN THE LIST**

*Colour* — Whitish: 5, 9, 10  
Grey: 20, 21

*Leaves* — Broad: 9, 17  
Wavy: 16, 17  
Curled: 22, 24, 7  
Half-curled: 6, 18  
Stiff and prickly: 15

*Fruit capsules* — Ribbed: 7, 14, 18, 22, 11  
Globular: 9, 10, 20, 21, 22  
Nodding: 8, 17, 19  
Erect: 7, 13, 25

