

aspect, and my present task is done. I have endeavored to describe to you the bones of the salmon (*Salmo-Salar*) as they appear to me to be. I have no theory to advance or support, and it is too much to expect that in what I have read to you there is no error, but it may serve to help some enquirer on his way, and if such be the result my time will not have been spent in vain.

(*For Figures see Appendix.*)

ART. VIII.—NOVA SCOTIAN FUNGI. BY J. SOMMERS, M. D.

(*Read Jan. 26, '80.*)

THE present paper affords a very short list of some of the more common species of our mycological flora, the result of a three months' study of a local botanical region.

During the time very many specimens have passed through our hands. Difficulties in diagnosis, want of sufficient time, and the evanescent characters of many of them, have been important factors in determining the length of our list, but we have observed enough to convince us that the fungi are capable of affording a field for study which will take many years of patient and laborious investigation to render complete.

Viewed either from scientific or economic point, the fungi furnish us with interesting matter for study and comparison. Their organization, growth and reproduction afford matter for originality in their treatment by scientists. Their medical and nutritive properties—their parasitical and destructive tendencies supply matter for reflection on the part of the economist.

To the student of nature they are of interest, as situate on the border line between the dead and living things of earth—maintaining the balance of power, devourers of dead organic matter, destroyers of decaying organisms; they supply, also, a bountiful store for hosts of highly vitalized, organized beings, and are not even disdained by man himself.

The local peculiarities of our Province now existing, viz., its dense woods and extensive swampy barrens, furnish favorable conditions for the development of this class of vegetables, which our dry atmosphere would, under other conditions, seriously interfere

with. The progress of arts and agriculture in the future, will with them, as in the case of our higher indigenous plants, cause their disappearance, the present is therefore the time to classify them and record their existence.

ORD. I.—AGARACINI.

SERIES—Leucospori.

SUB. GEN.—Amanita.

1. *Agaricus* (*Amanita*) *vaginatus*, *Bull.* Under hemlock and pine, N. W. A., Hx. Sept.

2. *Agaricus* (*Amanita*) *adnatus*, *Smith.* Under spruce; Point Pleasant, Hx. Sept.

3. *Agaricus* (*Amanita*) *muscarius* *L.* Not uncommon in same situation as above. September and October. Poisonous.

SUB. GEN.—Tricholoma, Fr.

4. *Agaricus* (*Tricholoma*) *columbetta*, *Fr.* Park woods; under spruce. Oct.

5. *Agaricus* (*Tricholoma*) *crassifolius*, *Berk.* Under spruce; Park woods. Oct.

SUB. GEN.—Clitocybe, Fr.

6. *Agaricus* (*Clitocybe*) *laccatus*, *Scop.* Common in most situations. Aug. to Oct.

SUB. GEN.—Colybia, Fries.

7. *Agaricus* (*Colybia*) *dryophilus*, *Bull.* Point Pl. Park, Hx. Oct.; on decaying leaves, etc.

SERIES—Dermini, Fr.

SUB. GEN.—Naucoria, Fr.

8. *Agaricus* (*Naucoria*) *nuceus*, *Bolt.* In the Park woods; under spruce fir. Oct.

9. *Agaricus* (*Naucoria*) *pediades*, *Fr.* In open spaces. Oct.

SUB. GEN.—Galera, Fr.

9. *Agaricus* (*Galera*) *ovalis*, *Fr.* On cattle droppings in woods. Nov.

SERIES—Pratellæ, Fr.

SPORES—Purple or intense Brown.

SUB. GEN.—Psalliota, Fr.

10. *Agaricus* (*Psalliota*) *campestris*, *L.* Everywhere in cultivated land, and pastures. Common mushroom.

SUB. GEN.—Pilosace, *Fries*.

11. *Agaricus* (*Pilosace*) *eximius?* *Peck*. On a decaying log; the Dingle, N. W. A., Hx. Sept.

SERIES—*Coprinarii*, *Fr.*; Spores Black.

SUB. GEN.—*Psathyrella*, *Fr.*

12. *Agaricus* (*Psathyrella*) *gracilis*, *Fr.* On cow droppings. Sept. In pasture; Dutch Village.

GENUS—*Coprinus*, *Fries*.

13. *Coprinus micaceus*, *Fr.* Common on dung and compost Aug., Nov.

GENUS—*Cortinarius*, *Fr.*

SUB. GEN.—*Dermocybe*, *Fr.*

14. *Cortinarius* (*Dermocybe*) *cinnamomeus*, *Fr.* In grassy spaces in the Park, Hx. Sept.

GENUS—*Lepista*, *Smith*.

15. *Lepista personata*, *Fr.* Park woods, Hx. Sept.

16. *Lepista cinerascens*, *Bull.* Under spruce and pine; Park. Oct.

GEN.—*Hygrophorus*, *Fr.*

17. *Hygrophorus ebureus*, *Fr.* Stem swollen; volva persisting; pileus $4\frac{1}{2}$ inch. Under pines in the Park, Hx. Oct.

GENUS—*Gomphidius*, *Fr.*

18. *Gomphidius glutinosus*, *Fr.* Common about Hx. Sept. and Oct. Growing on the soil.

GENUS—*Russula*, *Fr.*

19. *Russula vatrenosa*, *Fr.* Pine grove; Pt. Pleasant. Sept.

20. *Russula alutacea*, *Fr.* Under pines; Point Pleasant, Hx. Nov.

GENUS—*Marasmius*, *Fr.*

21. *Marasmius oreades*, *Fr.* "Fairy-ring champignon." Borders of woods and roadsides. Oct.

GENUS.—*Schizophyllum*, *Fr.*

22. *Schizophyllum commune*, *Fr.* On dead wood; common. Aug.

GENUS—*Lenzites*, *Fr.*

23. *Lenzites betulina*, *Fr.* Common on birch and stumps; perennial.

ORDER—Polyporei.

GENUS—*Boletus*, *Fr.*

24. *Boletus lividus*, *Fr.* Common. Poisonous. Aug. to Oct.
 25. *Boletus pachypus*, *Fr.* In woods; common. Aug.

GENUS—*Polyporus*, *Fr.*

26. *Polyporus fomentarius*, *Fr.* On birch; near Truro, N. S. July.

27. *Polyporus annosus?* *Fr.* On fallen hemlock trunk; near Truro, N. S. July. Persistent, pores? rich umber brown; margins velvety, of a deeper shade; cuticle dense, sooty, spotted or indefinitely marked; slate colored; consists of two masses, both provided with pores, etc., one resting above the other, but forming one substance, attached? its whole length at one side; body of upper mass extends one inch beyond the lower, the free under surface of this mass provided with pores like the lower one; Margins sinuous; pileus about five inches in width, by three inches in thickness; length, about four inches; very solid; woody; the two masses, viewed as a whole, resemble an agaricus with a very thick stipe; width of lower portion, three inches; thickness, three inches; length, about one and one-half inches. I give its characters in detail, because my diagnosis is a doubtful one.

28. *Poloporus versicolor*, *Fr.* Resupinate; persistent; common. On larch, hemlock, birch, etc.

ORDER—Hydnei.

GENUS—*Hydnum*, *Linn.*SECT.—*Mesopus*.

29. *Hydnum repandum*, *L.* Near the roots of pines. Point Pleasant Park, Hx. September.

GENUS.—*Sistotrema*, *Fr.*

30. *Sistotrema confluens*, *Pers.* In the Park. Oc.

ORDER—Phalloidei.

GENUS—*Cynophallus*, *Fr.*

31. *Cynophallus caninus*, *Fr.* Found by Mr. R. Morrow in a drain on his property.

ORDER—*Trichogastres*.GENUS—*Lycoperdon*, *Tourn.*

32. *Lycoperdon cœlatum*, *Fr.* Common in pastures. Aug., Sept.

33. *Lycoperdon gemmatum*, Fr. In fields and pasture.
Common. Aug., Sept.

ART. IX.—NOVA SCOTIAN GEOLOGY.—NOTES ON A NEW GEOLOGICAL PROGRESS MAP OF PICTOU COUNTY. BY THE REV. D. HONEYMAN, D. C. L., F. S. A., *Hon. Member of the Geol. Assoc., London, &c.; Curator of the Provincial Museum, and Professor of Geology in Dalhousie College and University.*

(Read May 10, 1880.)

INTRODUCTION.

THE map exhibited is the first of a series which I have been engaged for some time constructing.

They are all on a scale one inch to the mile. Church's county maps are generally used for topography. Occasionally the Admiralty charts are used in the delineation of harbours and portions of coasts of geological importance. From these and railway section books elevation measurements are largely obtained.

The various papers that I have submitted to the Institute and these maps may be regarded as mutually illustrative.

Additional notes, however, seem to be required, in the case of some maps, for the following among other reasons :

1st. Railways have been, or are being, constructed which are of more or less geological importance. These, in their nature, could not be referred to in papers already communicated.

2nd. New facts may have come to light.

3rd. Certain old facts may have to be brought into connection with these new facts for specific purposes.

The following notes on the progress map of Pictou county seem to be required on considerations as above.

GREAT COAL FIELD.

A prominent feature of our map is an irregular polygon colored black. This is the Pictou coal field as defined by Sir W. E. Logan and E. Hartley. I have simply transferred it from the map