

DIVISION LYCOPODIOPHYTA

LYCOPODIACEAE, Clubmoss Family

1. LYCOPODIUM L. Clubmoss

Perennial, evergreen; main stem trailing on ground or subterranean, dichotomously branched, one branch usually erect; leaves small, scalelike, sometimes with decurrent base adnate to stem, or linear, 4-many-ranked; sporophylls in cones or in zones alternating with zones of foliage leaves; sporangia globose or reniform, solitary on base of sporophyll or in its axil.

- a Sporophylls in zones alternating with zones of foliage leaves.
 - b Leaves minutely toothed, widest above middle. 2. *L. lucidulum*
 - b' Leaves scarcely toothed, widest near middle. 1. *L. porophilum*
- a' Sporophylls in terminal cones, sometimes differing in shape from foliage leaves.
 - c Stem flat; foliage leaves 4-ranked, scalelike; cones peduncled, often clustered; erect branches fanlike, forming funnels. 4. *L. digitatum*
 - c' Stems not flat; foliage leaves 8-10 ranked, linear to linear-lanceolate. 3. *L. annotinum*

1. †*Lycopodium porophilum* F.E.Lloyd & Underw. Rock Club-moss

Sporophylls alternating with foliage leaves (not in terminal cones); leaves spreading, irregularly serrate-toothed, approx. 7.5 mm long & 1.0 mm wide.

HERBARIUM RECORD: 18 May 1904—collected by *Spease* (Bolenbaugh, 16 Nov 1906).

2. *Lycopodium lucidulum* Michx. Shining Clubmoss

Sporophylls alternating with foliage leaves (not in terminal cones); leaves minutely toothed, reflexed to spreading, widest above middle.

REFERENCES: Riddell 1836:22 (slaty ravines, Franklin Co., *Lapham*); Sullivant 1840:55; Selby & Craig 1890:18.

HERBARIUM RECORDS: [ca. 1834]—Cols., *Lapham* (MUS); 1840—Cols., *Sullivant*.

3. *Lycopodium annotinum* L. Stiff, Bristly or Interrupted Club-moss

REFERENCE: Riddell 1834:159 (rocky situations).

NOTE: No specimens seen from Franklin Co. Perhaps Riddell misapplied this name.

4. †*Lycopodium digitatum* Dill. Trailing Club-moss, Fan Club-moss

Sporophylls in terminal cones; stems flat; horizontal branches creeping at surface of ground (not buried); tip of leaf on lower surface of stem not reaching base of one next above. Dry open woody area of secondary growth. Syn.:

L. complanatum L. var. *flabelliforme* Fernald

HERBARIUM RECORDS: 1840—Cols., *Sullivant*; 17 Apr 1934—Camp Wildwood, Big Walnut Creek, *Hicks & E. Thomas*; 4 Oct 1936—Big Walnut Creek at YWCA Camp, *Chapman*; 21 May 1971—N of Hudson St. on N. Olentangy R., old field succession area behind housing development, uncommon in shade, *Wagner, Duncan, Young, Stevenson & Roberts 7251*; 17 Jul 1971—W of Olentangy River Rd., approx. ½ mi. N. of Henderson Rd., locally common, Clinton Twp., *Roberts 1342*; 1 May (sterile) & 14 Aug (cones) 1982—Blendon Woods, *Owens*; 1 Aug 1990—Hoover Dam Park, E side, just W of Cabbage Rd. & S of Walnut St., *Lowden 4480*.

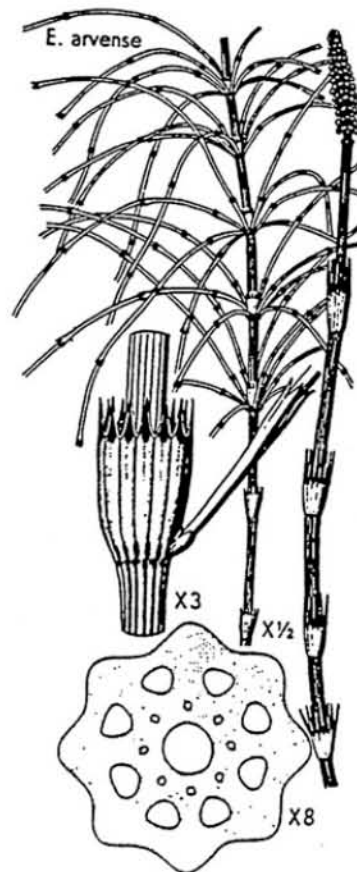
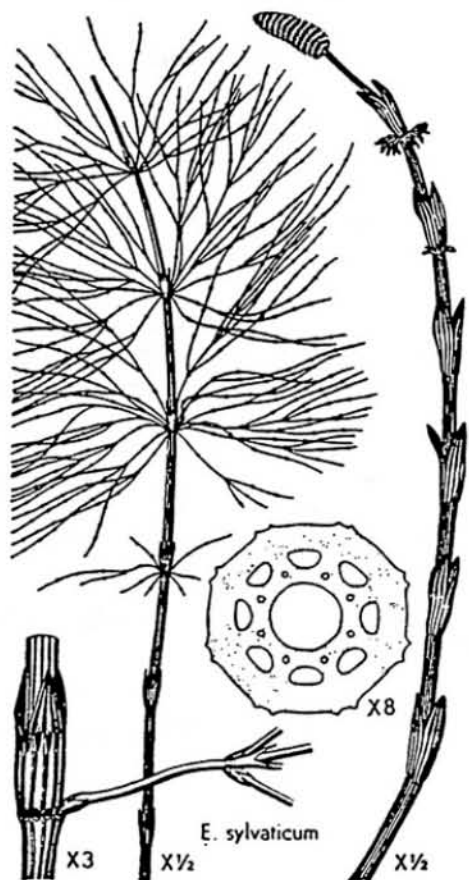
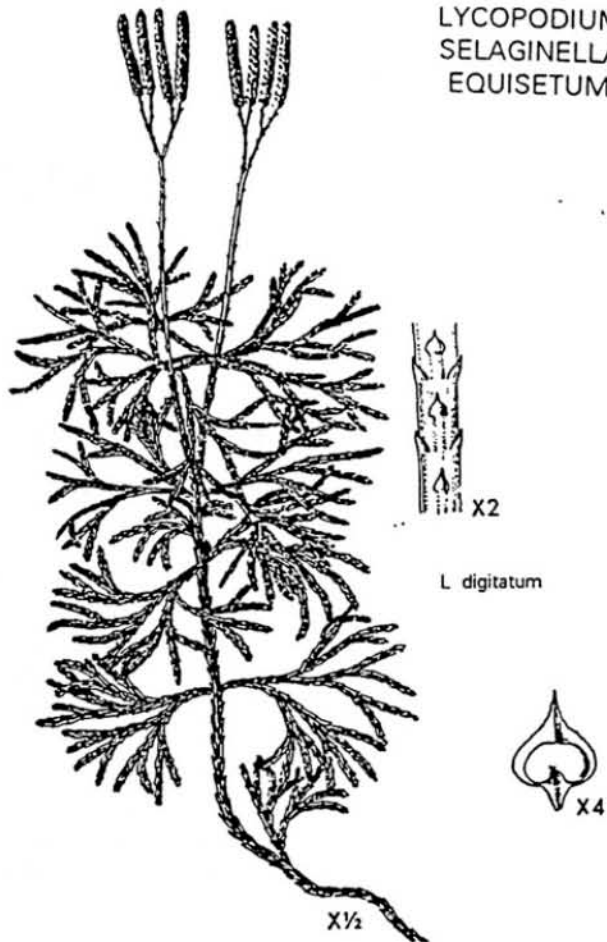
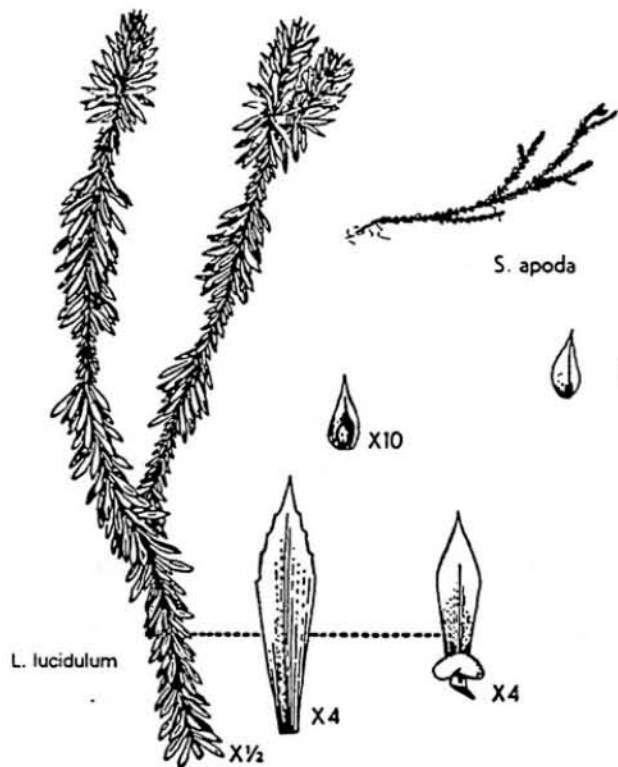
SELAGINELLACEAE, Selaginella Family

1. SELAGINELLA P.Beauv.

Small herbs; stems erect or prostrate, branched; leaves small, each bearing on upper side near base a small membranous flap, the ligule; microsporophylls and megasporophylls 4-ranked, in same cones; cones sessile on leafy branches.

1. *Selaginella apoda* (L.) Spring Meadow Spike-moss

LYCOPODIUM
SELAGINELLA
EQUISETUM



Plants small, of moist habitats, delicate, creeping or ascending, light green; leaves ovate, minutely serrate, sterile ones 4-ranked, lateral ones the larger.

HERBARIUM RECORD: 1840—Cols., *Sullivant*.

NOTE: Both *Sullivant* 1840:55 (*Lycopodium rupestre* L.) and Selby & Craig 1890:18 (*Selaginella rupestris* Spring) cited [*Selaginella rupestris* (L.) Spring] as plants collected in adjacent counties.

DIVISION EQUISETOPHYTA

EQUISETACEAE, Horsetail Family

1. EQUISETUM L. Horsetail, Scouring-rush

Stems erect or decumbent, from rhizomes, ridged and grooved, deposits of silica on the ridges; stomates in the grooves in definite rows, in bands, or scattered; leaves small, united except at their tips, forming sheaths at the nodes, the free tips persistent or deciduous; sporophylls in cones, each sporophyll with a stalk and a peltate top beneath which several sporangia are borne.

- a Stomates not in 2 lines in the grooves; stems containing chlorophyll and branched or stems with little or no chlorophyll, fertile, usually unbranched.
- b Branches sometimes few, not again branched; stems green, not dimorphic, central cavity 4/5 the diameter; teeth of sheaths not deciduous. **3. *E. fluviatile***
- b' Sterile stems with many branches, green; fertile stems often unbranched, brown or pink, with little or no chlorophyll.
 - c Branches of sterile stem again branched, slender, spreading; teeth of sheaths coherent as 3-4 lobes, translucent; green branches developing on fertile stems; ridges flat-topped or concave, with short hairs or spinules on edges. **4. *E. sylvaticum***
 - c' Branches of sterile stem usually not again branched; teeth usually separate; fertile stems soon withering; ridges not as above. **5. *E. arvense***
- a' Stomates in 2 lines in the grooves (except in *E. fluviatile*); stems not dimorphic, unbranched or with few branches, containing chlorophyll.
 - d Ridges of sheath not wider than grooves; stem smooth; teeth persistent, separate, lanceolate, not hyaline-margined. **3. *E. fluviatile***
 - d' Ridges of sheath more or less flattened, wider than grooves; teeth hyaline-margined, sometimes deciduous.
 - e Sheath longer than wide, flaring at summit, usually with 1 dark band at top; teeth deciduous. **2. *E. laevigatum***
 - e' Sheath about as long as wide, cylindrical, usually with dark band at top and at base; teeth deciduous or persistent; ridges rough. **1. *E. hyemale***

1. *Equisetum hyemale* L. var. *affine* (Engelm.) A.A.Eaton

Common Scouring-rush

Stomates in 2 lines in the grooves; stems many ridged, with one row of tubercles on each ridge; ridges of sheath flattened, wider than grooves, teeth if persistent, hyaline-margined; sheaths almost as long as wide, with dark band at top and at base. Woody ravines.

REFERENCES: Riddell 1834:159; *Sullivant* 1840:54; Selby & Craig 1890:18.

HERBARIUM RECORDS: 20 Jun 1922—Indian Springs, Cols., *J. H. Schaffner*, 15 Oct 1922 & 21 Jun 1925—Cols., *J. H. Schaffner*, 1 Nov 1926—Cols., *J. H. Schaffner*, 13 May 1928—Cols., *J. H. Schaffner*, 9 Sep 1928—Indian Springs, Cols., *J. H. Schaffner*, 27 Sep 1930—Cols., *J. H. Schaffner*, 24 Apr 1938—Cols., *J. Herrick* (KE); [ca. 1982]—Spring Hollow and Blendon Woods, *Owens*; 23 May 1989—Overbrook Dr. Ravine, just W of Indianola Ave., S. of Cooke Rd., Clinton Twp., *Lowden* 4070.

2. *Equisetum laevigatum* A.Braun

Smooth Scouring-rush

REFERENCE: King 1981:119 (Pleasant Twp.: 1-Battelle-Darby Creek, Metro Park, bluff prairie).

NOTE: No specimens seen from Franklin Co.

3. *Equisetum fluviatile* L.

Water Horsetail

Syn.: *E. limosum* L.