

Originally cultivated (native of Europe)

Plants aquatic; blades 4-foliolate; sporocarps borne on paired stalks near petiole base.

REFERENCE: Stuckey & Roberts 1977:38 (rare aquatic plants non-indigenous in Ohio, Franklin Co. record in the year 1941, Ohio 1941 year of earliest known record, latest 1970; pond in quiet, open water).

HERBARIUM RECORDS: Spring 1899—OSU Greenhouse, *J. H. Schaffner*; 27 Sep 1902—OSU campus, Cols., *J. H. Schaffner*; 10 Jul 1905—OSU escaped, *Fischer*; 7 Feb 1940—tanks in OSU Greenhouse, *C. Jones*; 15 Sep 1941—N of Worthington, *Roller*.

SALVINIACEAE, Floating Fern Family

Small floating water ferns; microsporangia and megasporangia in separate sporocarps.

1. AZOLLA Lam. Mosquito Fern

Minute plants ½ to 1 cm across; leaves about 0.5 mm long, alternate, papillose, 2-lobed, upper lobe emersed, lower one submersed; roots delicate.

1. *†*Azolla caroliniana* Willd.

Water-velvet, Eastern Mosquito Fern

Spread from cultivation

Small aquatic plants rooted in ooze or floating; leaves about 0.5 mm long; microsporangia and megasporangia in separate sporocarps.

REFERENCES: Jones 1943:87; Stuckey & Roberts 1977:39 (rare aquatic plants non-indigenous in Ohio, Franklin Co. neither previous to 1900 nor since 1950, Ohio 1901 year of earliest known record, latest 1974, pond in quiet, open water).

HERBARIUM RECORDS: 15 Sep 1929—Baumgardner's Lake, planted there by Lawrence E. Hicks in the spring, *Harper*, 1938—tanks in OSU greenhouse, *C. Jones*.

DIVISION PINOPHYTA, GYMNOSPERMS

GINKGOACEAE, Ginkgo Family

1. GINKGO L.

Dioecious; leaves deciduous, alternate, fan-shaped, often lobed or bifid, dichotomously-veined, crowded on dwarf branches or scattered on elongate stems; stamens and carpels on dwarf branches, appearing with the leaves.

1. **Ginkgo biloba* L.

Maidenhair Tree

Cultivated

Tree dioecious; leaves deciduous, alternate, fan shaped, often bifid, dichotomously-veined.

REFERENCE: Specimen Trees on Campus #12 (A Walking Tour).

HERBARIUM RECORDS: 1897—OSU campus, *E. A. R.*; 1 Jun 1898 & 24 Sep 1904—OSU campus, Cols., *J. H. Schaffner*; Oct 1933—Goodale Park, Cols., *J. H. Schaffner*; 22 Apr 1988—OSU Campus, W side of oval, cult., *M. Hoffman* 33; 25 Apr 1988—OSU Campus, E side of the Agriculture Administration Bldg., cult., *M. Hoffman* 34; 14 Jun 1989—OSU campus, behind B&Z Bldg., *Lowden*.

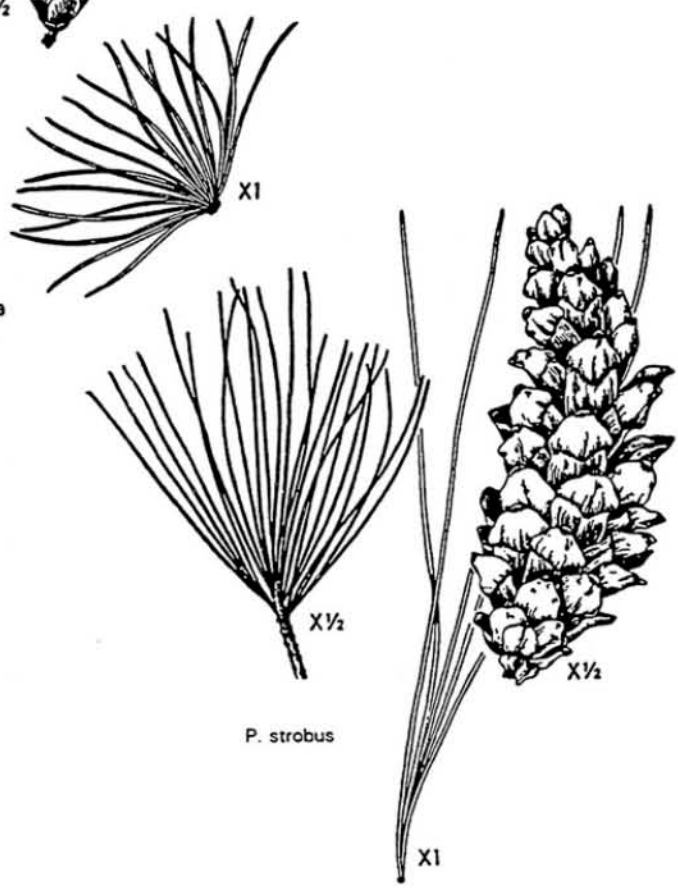
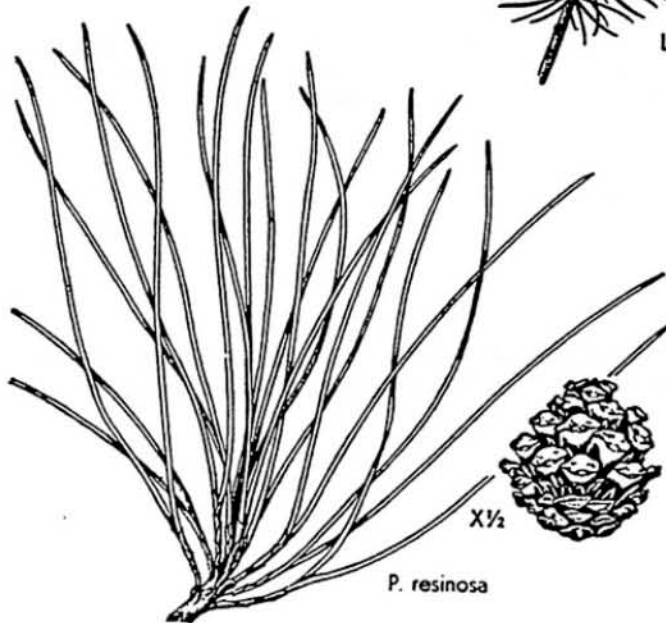
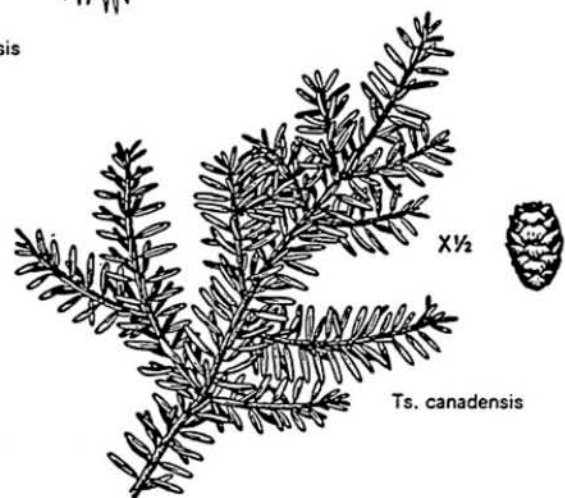
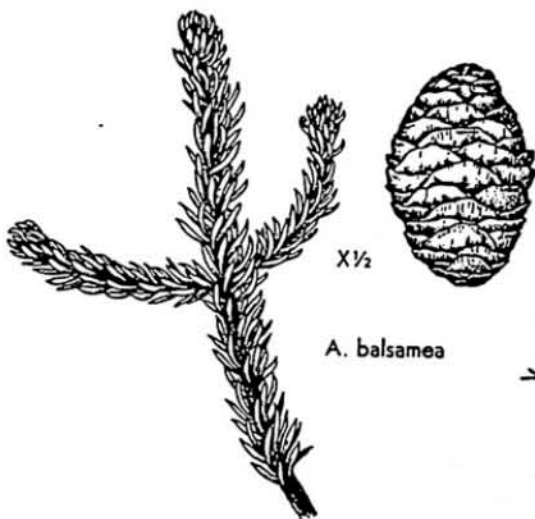
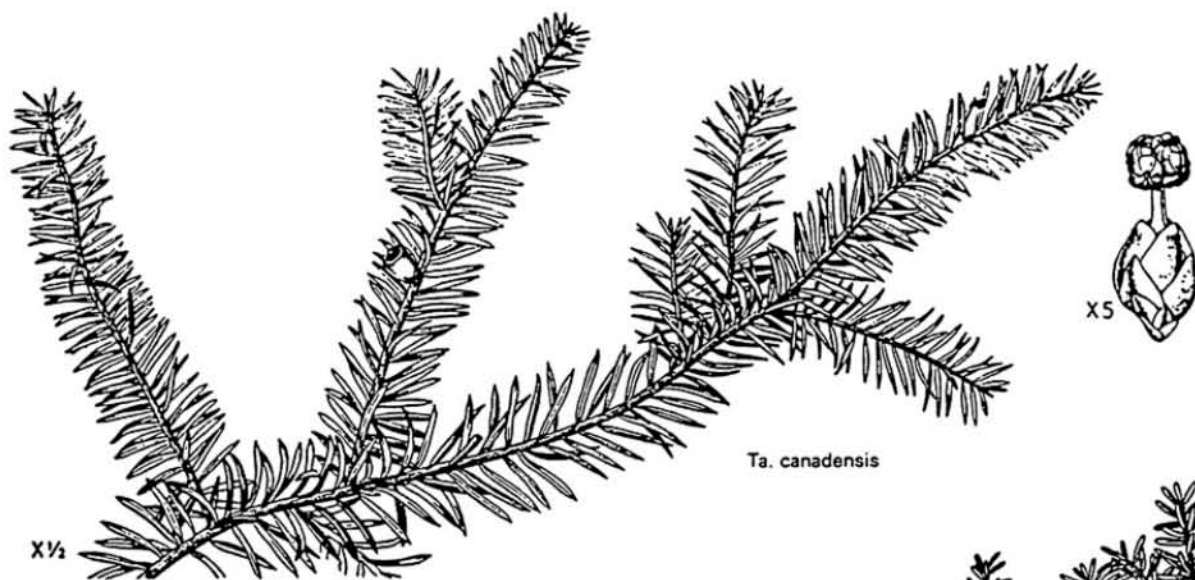
NOTE: See Braun 1961:67.

TAXACEAE, Yew Family

1. TAXUS L. Yew

Evergreen shrub; leaves flat, linear, 1-2.5 cm long, spirally arranged, spreading and appearing 2-ranked; stamens peltate, several on a short axillary stem subtended by scales, each stamen with 4-6 microsporangia; carpellate cone a single ovule surrounded at maturity by a fleshy red aril.

TAXUS
ABIES
TSUGA
LARIX
PINUS



The English Yew of Europe, *Taxus baccata* L., is a cultivated ornamental on the OSU Campus (20 May 1932, Hicks 81). Horticultural forms are derived from *T. baccata* and the E Asian *T. cuspidata* Siebold & Zucc. (Braun 1961:58).

1. *Taxus canadensis* Marshall

Yew, Ground-hemlock, American Yew

A straggling shrub; leaves green beneath, wilted foliage poisonous due to a toxic alkaloid; aril-covered seed, scarlet, berry-like, flesh edible but stone poisonous. Syn.: *T. canadensis* Willd.

REFERENCES: Riddell 1834:157 (*Abies canadensis*); Dobbins 1937:100 & 102 (glacial relics or boreal relict associations: "The yew also persists on the damp, shaded, N-facing cliff at Hayden's Falls on Hayden's Run, a small tributary of the Scioto NW of Cols. in Franklin Co., picture 28"); Braun 1961:59 (illus. p. 60).

HERBARIUM RECORDS: 20 Aug 1899—Hayden's Falls, *Sarle* (OS, WOOS); 3 Jun 1903—Hayden's Falls, *Sanders*; 10 Oct 1903—Hayden Falls, on N-facing limestone cliff, near Cols., *J. H. Schaffner*; 12 Aug 1905—Hayden Falls, *Fischer*; 19 May 1906—Hayden's Falls, *Greener*.

NOTE: Both Sullivant 1840:41, 60 (*Taxus canadensis* Marshall) and Selby & Craig 1890:15 (*Taxus canadensis* Willd.) refer to this plant as collected in adjacent counties.

PINACEAE, Pine Family

Leaves needlelike or flat and narrowly linear, alternate, sometimes crowded on dwarf branches; leaf-buds scaly; ovulate cones becoming coriaceous or woody.

Species that are commonly cultivated as ornamentals on the OSU Campus and elsewhere are: White Fir, *Abies concolor* (Gordon) Engelm. (Specimen Trees on OSU Campus, A Walking Tour, #36; 20 June 1932---Cols., Hicks); Balsam Fir, *Abies balsamea* (L.) Miller (Mar 1915---OSU Campus, *N. Musselman*); and Norway Spruce, *Picea abies* (L.) H.Karst., having 4-angled leaves (Syn. *P. excelsa* Link; 9 Apr 1912---OSU Campus, Cols., *J.H.Schaffner*).

a Leaves not in fascicles or clusters on dwarf branches.

b Cones pendulous, scales persistent; leaves attached to sterigmata.

c Leaves flat, short-petioled above sterigmata. 1. TSUGA

c' Leaves 4-sided, not petioled above sterigmata. PICEA A.Dietr.

b' Cones erect, scales deciduous at maturity; leaves attached directly to twig. ABIES Mill.

a' Leaves in fascicles or clusters on dwarf branches.

d Deciduous; leaves in clusters of more than 5 on dwarf branches and also some leaves scattered on elongate stems. 2. LARIX

d' Evergreen; leaves in fascicles of 2-5 on dwarf branches. 3. PINUS

1. TSUGA Carrière Hemlock

Evergreen tree; leaves flat, linear, 5-15 mm long, short-petioled, with 2 white bands of stomates beneath, those lateral and ventral on the stem spreading in one plane, those dorsal on the stem shorter and appressed; monoecious; cones on twigs of previous season, staminate globose, very small, carpellate ellipsoid, 1-2 cm long; seeds winged.

1. *Tsuga canadensis* (L.) Carrière

Canadian Hemlock, Eastern Hemlock

Native but cultivated

Leaves on dorsal side of stem-segment shorter than those spreading laterally.

REFERENCE: Chapman 1929 (Red Hills Region of Franklin Co. Chapman's #185 *Tsuga canadensis*, Hemlock, reads "Reported but not verified by me" crossed out and "Dela. Co." added).

HERBARIUM RECORDS: 15 Mar 1899—OSU campus, *J. H. Schaffner*; 16 Oct 1901—OSU Campus, cult., Cols., *Hartford*; Jan 1983—Blendon Woods, planted, *Owens*; 29 Sep 1985—Highbanks Metro Park (Delaware Co.), edge of forest, cult., *Witsberger 864* (OWU); 23 May 1989—92 Overbrook Dr., E of N. High St. & S of Cooke Rd., Clinton Twp., *Lowden 4080*.

NOTE: See Braun 1961:61 (illus. p. 60). Both Sullivant 1840:41 (*Pinus canadensis* L., Hemlock Spruce) and Selby and Craig 1890:15 refer to plants collected in adjacent counties. Personal communication with James McCormac reveals that Battelle Darby Creek Metro Park has some mature native hemlock trees on bluff to the right of main entrance.