



PINACEAE  
*Tsuga heterophylla* (Raf.) Sarg.  
 Tshe  
 western hemlock

FORM: Tree, 30-50m (100-160ft) tall; narrow pyramidal crown with drooping terminal leader.

ID CHAMPION: 1985; 58in dbh; 182in circum; 165ft tall; 14ft crown=361pts.

BARK: Young trees scaly, russet-brown; old trees hard, dark russet-brown; furrows separating widely, flat ridges, inner bark dark purple-red.

BUDS: Light brown, rounded, 2mm long.

LEAVES: Thin, flat, singular, petiolate, dark green needles 6-10mm long, grooved above, marked with white stomata bands below, apex rounded, needles of varying lengths (1), 2-ranked on twig (2).

CONES: Light brown, 2cm (<1in) long, thin scales narrow with wavy margin; ripens first year, Aug.-Oct.; seed shed Sept.-Jan., after seed release cones remain on trees until the next summer.

ENEMIES: Diseases: *Echinodontium tinctorium*, *Fomes anosus*, *F. pini*, *Phellinus (Poria) weirii*, *Armillaria* species, *Phaeolus (Polyporus) schweinitzii*, *Polyporus tomentosus*, and dwarf mistletoe; Fire: moderately susceptible.

SIMILAR SPECIES: *Tsuga mertensiana*, p.27; and as sapling *Taxus brevifolia*, p.24.

NOTE: Largest hemlock native to the United States.

	Sya h.t.		Phpo	
	Phma h.t.			
	Caru	Caru	Psmc	
	Aruv	h.t.		
	Phma	Phma		
	Smsr	h.t.		
1	Phma	Phma	Abgr	
	Cooc	h.t.		
	Libo	Libo		
	Xete	h.t.		
1	Asca	Asca		
	Tabr	h.t.		
	Mefe			
	Setr	h.t.		
	Phma			
1	Clun	Clun		
	Tabr		h.t.	
	Mefe			
1	Xete		Xete	
	Vagl	h.t.		
	Cooc			
1	Clun	Clun	Tlpi	
	Tabr			h.t.
1	Mefe			
	Xete			
	Asca	Asca		
	Tabr			h.t.
	Mefe			
	Gydr	h.t.		
3	Adpe	h.t.		
1	Adpe	Atfi		
2	Atfi		h.t.	
6	Opho	h.t.		
10	Clun	Clun	Tshe	
9	Arnu			h.t.
9	Mefe			
10	Xete			
10	Asca			Asca
10	Arnu			
10	Mefe			
9	Gydr	h.t.		
+	Mefe	Clun		Tsmc
	Xete			
	Xete	Mefe		
	Luhi	h.t.		
	Mefe	Stam		
	Luhi	h.t.		
	Vagl	Xete		
	Luhi	h.t.		
3	Clun	Clun	Abla	
	Mefe			
2	Xete			
	Cooc			
2	Xete	Mefe		
	Vasc			h.t.
	Luhi			
	Mefe	Stam		
1	Lica	h.t.		
	Caca	Caca		
	Vaca		h.t.	
	Legl			
	Cooc			
	Vagl	Xete		
	Vasc	h.t.		
	Luhi			
	Vasc	h.t.	Pico	
	Xete	c.t.		
	Vaca	c.t.		