

# *Betula pendula* Roth, *B. pubescens* Ehrh.

**Standardized Common Name:** Birch

**Other Common Names:** Common Birch, Downy Birch, European White Birch, Silver Birch, White Birch

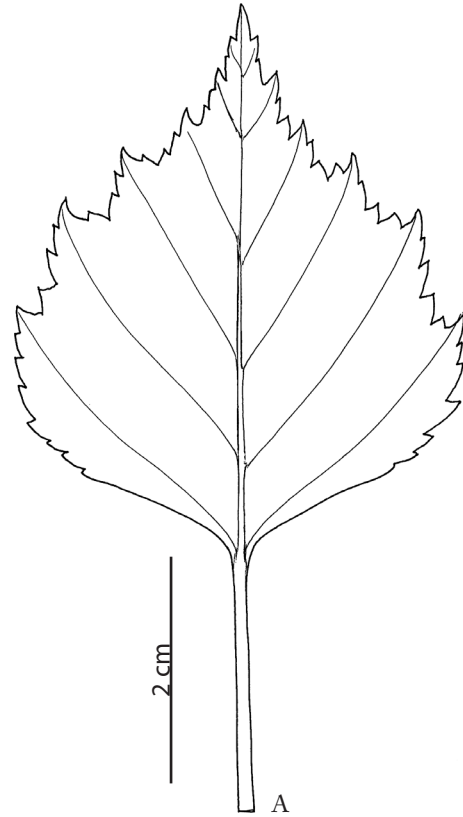
**Family:** Betulaceae

**Taxonomy:** *Betula* includes about 35 species of trees, which are native to temperate habitats in Eurasia and North America. *Betula pendula* and *B. pubescens* are among four European species. The name *B. alba* L., sometimes applied to both of these, has been rejected by taxonomists because it has been too widely misapplied. Both species, especially *B. pubescens*, are quite variable; a dozen other obsolete synonyms exist, and a number of infraspecific taxa have been described for each. The two also hybridize freely and occasionally intergrade, but the consensus opinion is that they should be treated as separate species.

**Description:** Trees, sometimes multiple-trunked, or large shrubs, with whitish bark separating from trunk in large pieces. Branchlets of *B. pendula* hanging downward from branches, bearing resin glands on surface; branchlets of *B. pubescens* spreading outward, pubescent. Leaves alternate or clustered beneath catkins; shape variable within and between species, 3–5(–7) cm long, deltoid to ovate or rhombic; base truncate to cuneate or rounded; apex acuminate or acute; margins doubly or irregularly serrate; venation with prominent midrib and with several pairs of primary veins running from midrib toward teeth, parallel and slightly curving. Inflorescences wind-pollinated catkins, unisexual, cylindrical, to several cm long, consisting of numerous tiny reduced flowers, without perianth and subtended by bracts. Male flowers reduced to small scale and 4 stamens; female flowers reduced to single ovary. Fruit a small, wind-dispersed samara.

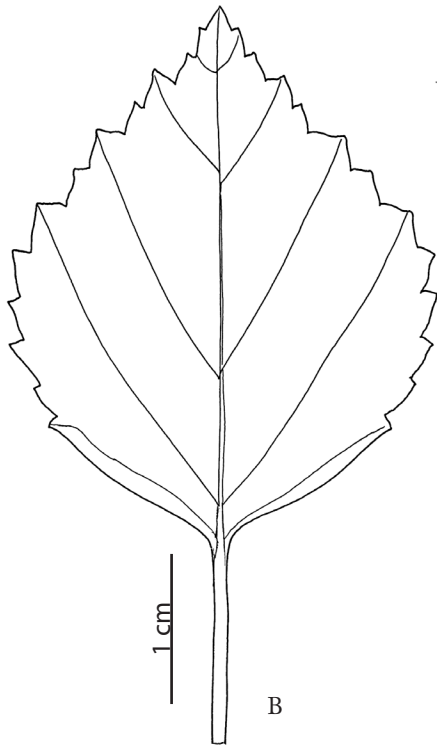
**Parts in Commerce:** Leaves

**Identification:** Though hybridization between these two species does occur, they can generally be distinguished from one another by leaf morphology.



**Figure 13:** a, *Betula pendula* leaf.

	<b>B. pendula</b>	<b>B. pubescens</b>
<b>Leaf shape</b>	Ovate-deltoid, broadest near base, sometimes rhombic	Variable; often deltoid or rhombic, broadest near the middle
<b>Leaf length</b>	(2–)3–7 cm	Usually 3–5 cm; 1.5–3 cm in some European varieties
<b>Leaf base</b>	Truncate to cuneate	Rounded to truncate
<b>Leaf apex</b>	Acuminate	Acute
<b>Leaf margins</b>	Biserrate, with few large teeth bearing numerous small teeth	Irregularly toothed
<b>Leaf pubescence</b>	Glabrous or nearly so, except for small round oil glands on both surfaces	Slightly pubescent with very short hairs, especially in axils of main veins beneath



**Figure 13:** b, *B. pubescens* leaf.

Several characters are common to both species:

- Petiole not more than half as long as blade
- Blade thin-textured
- Lower surface paler green
- With prominent midrib from which up to 7 pairs of primary veins arise; primary veins run in parallel almost to the teeth, curving slightly; venation most conspicuous below
- Taste weak, slightly bitter

**References:**

Gardiner AS, Pearce NJ. Leaf-shape as an indicator of introgression between *Betula pendula* and *B. pubescens*. *Trans Bot Soc Edinburgh*. 1979;43:91–103.

Walters SM. *Betula*. In: Tutin TG, Heywood VH, Burges NA, et al., eds. *Flora Europaea*. Vol. 1. 2nd ed. Cambridge: Cambridge University Press; 1993:68–69.

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