***Platanus leucophylla* (Unger) Knobloch 1971 (Platanaceae)**

Leaf description

- **morphology:**
  organisation: simple; **petiole:** long; **shape:** palmately lobed; **leaf base:** base angle obtuse, base shape concavo-convex, truncate to rounded; **leaf apex:** apex angle odd-lobed acute; apex shape straight to acuminate; **margin:** coarsely dentate; tooth density low, teeth widely spaced, tooth size large, often hook-shaped, tooth apex acute, tooth sinus rounded; **1°-vein framework:** actinodromous to palinactinodromous in which the lateral main veins usually arise alternately in suprabasal position; **2°-vein framework:** craspedodromous, secondaries widely spaced, ending in the tooth apex of the marginal teeth; **3°-vein framework:** percurrent, sinuous.
- **cuticle:**
  hypostomatic; **adaxial cuticle:** delicate to medium thick, surface more or less faintly striate, anticlines straight to somewhat curved, cells rather large up to 50–60 µm in diameter, glabrous or sometimes with scattered tichome bases as on the abaxial cuticle (see below); **abaxial cuticle:** delicate to medium thick, surface distinctly striate to wrinkled, striae running parallel, arranged in somewhat wavy bundles, oriented more or less radially around stomata; anticlines straight to somewhat bent, forming polygonal cells, 20–35 (rarer up to 40–50) µm in diameter, stomatal complexes anomocytic to cyclocytic (laterocytic), subsidiary cells forming a very narrow, inconspicuous ring, stomata elliptic to roundish, size variable, 24–46 µm long, 19–37 µm wide, polar thickenings I-shaped, stomatal ledges conspicuous, front cavity elliptic, 12–29 µm long, not reaching the poles; trichome bases present, more or less densely scattered, four- to five-celled, roundish to polygonal, usually about 25 µm and up to 30 µm across.

Palecology

- **habitat:** riparian to mesophytic forests
- **vegetation type:** mainly broad-leaved deciduous forests
- **life form:** tall tree
- **foliage persistence:** probably deciduous or semi-deciduous leaves
- **flower ecology (pollination):** ?
- **fruit ecology (dispersal):** wind-dispersed (anemochorous)

Stratigraphy / Distribution

- **stratigraphy:** Eocene to Late Miocene
- **distribution:** *P. leucophylla* has been described from the Eocene of the Far East and Oligocene of Kazachstan (Kiin-Kerish). It appears first in eastern Europe from the upper Middle Miocene onwards. In Europe records from the Upper Miocene are common.

Miscellaneous

- **synonyms:** *Platanus platanifolia* (ETTINGSHAUSEN) KNOBLOCH
- **modern relationship:** *P. leucophylla* resembles modern plane trees with palmately lobed leaves as *P. occidentalis* and *P. orientalis*. Today, *Platanus* occurs disjunct with about 10 species being restricted to North America (*P. occidentalis* L., *P. wrightii* WATSON., *P. racemosa* NUTT.), Mexico and Central

America (*P. mexicana* MORIC.), the Eastern Mediterranean to Asia Minor (*P. orientalis* L.) and Vietnam and Laos (*P. kerrii* GAGNEP.).

- **remarks:** These leaves are usually large. Characteristic is the coarse dentation composed of rather large, often hook-shaped teeth. The lateral main veins usually arise asymmetrically in some distance from the base of the lamina.

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28 macroscopic leaf traits are stored in *Digiphyll*

#	trait code	trait: charcters state
1	A-1.2	petiole: present
2	A-1.2.2	petiole, present: long
3	A-2.1	leaf organisation: simple
4	A-3.6	leaf shape: lobed
5	A-3.6.2	leaf shape, lobed: palmately lobed
6	A-4.2	leaf base angle: obtuse
7	A-5.1	leaf base shape: without basal extension
8	A-5.1.1	leaf base shape, without basal extension: cuneate (straight)
9	A-5.1.2	leaf base shape, without basal extension: rounded
10	A-6.1	leaf apex angle: acute
11	A-7.1	leaf apex shape: attenuate (straight)
12	A-8.2	leaf margin: toothed
13	A-8.2.2	leaf margin, toothed: dentate
14	A-9.1.1	leaf teeth, order number of teeth: simple order (first order)
15	A-9.2.2	leaf teeth, tooth density: not dense
16	A-9.3.2	leaf teeth, tooth size: big
17	A-9.4.1	leaf teeth, tooth apex shape: acute
18	A-9.4.2	leaf teeth, tooth apex shape: rounded
19	A-9.5.2	leaf teeth, tooth sinus shape: rounded
20	B-1.2	primary vein framework: palmate
21	B-1.2.1	primary vein framework, palmate: actinodromous
22	B-1.2.1.1	primary vein framework, palmate, actinodromous: basal actinodromous
23	B-2.1	secondary vein framework: 2° veins reach margin
24	B-2.1.1	secondary vein framework, 2° veins reach margin: craspedodromous
25	B-3.2	intramarginal vein: absent
26	B-4.1	intersecondaries: present
27	B-5.1	tertiary vein framework: percurrent
28	B-5.1.3	tertiary vein framework, percurrent: mixed

For a detailed description of the leaf traits see menu *Manuals*.

? microscopic leaf traits are stored in *Digiphyll*

comming soon

Fossil macroscopic images

References

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Version: 2019-10-21