***Myrica longifolia* (Unger) Saporta (Myricaceae)**

Leaf description

- **morphology:**
  leaves coriaceous; **organisation:** simple; **petiole:** long-petiolate; **shape:** linear, up to at least 110 mm long, **leaf base:** base angle narrow acute, base shape decurrent, **leaf apex:** apex angle narrow acute, apex shape attenuate; **margin:** irregulare simply toothed to entire near the base of the lamina, wavy due to the widely, more or less irregularly spaced, small and acute to spiny teeth; **1°-vein framework:** venation pinnate, midvein stout, straight or bent; **2°-vein framework:** secondaries already delicate, densely spaced, arising under wide angles from the midvein, semicraspedodromous (?); **3°-vein framework:** tertiaries and higher order veins reticulate.
- **cuticle:**
  adaxial cuticle: medium thick; anticlines slender; straight to slightly rounded to a bit sinuous; trichome bases scattered, consisting of a two- to four-celled foot, well cutinised, about 15–25 µm across, surrounded by a ring of thickened, small trichome base cells, sometimes even the wider surrounding area may appear stronger cutinised than areas without tichome bases; **abaxial cuticle:** thickness delicate; anticlines slightly more delicate than adaxially; stomatal complexes anomocytic, roundish, about 14–22 µm in diameter, front cavity narrow oval, stomatal ledges weakly to well cutinised.

Palecology

- **habitat:** *M. longifolia* is very well documented from plant assemblages that derive from near-coastal habitats. Modern *Myrica* species favour good light conditions. Due to the uncertainities regarding modern close relatives among *Myrica* its more precise ecology remains open.
- **vegetation type:** ?
- **life form:** shrub or small tree
- **foliage persistence:** probably evergreen leaves
- **flower ecology (pollination):** wind-pollinated (anemophilous)
- **fruit ecology (dispersal):** animal-dispersed (zoochorous)

Stratigraphy / Distribution

- **stratigraphy:** Eocene to Early Oligocene
- **distribution:** Europe

Miscellaneous

- **synonyms:** –
- **modern relationship:** *Myrica californica* CHAM. and *M. conifera* BURM. have been mentioned in the literature to show similarities. Though the generic affinity is undisputable, no species is known to resemble closely.
- **remarks:** Due to the decurrent leaf base the petiole is not clearly delimited from the lamina. The course of the secondaries near the leaf margin is hardly ever visible. Unger (1850) already recognised the true generic affinity of these leaves, when he described them from the flora of Socka (formerly Sotzka) in Slovenia (early Oligocene). Later Ettingshausen (1853) assigned such leaves erronously to

the genus *Banksia* (Proteaceae) when he described the flora of Häring (Tyrol, Austria, early Oligocene) assuming a relationship of the European plant record from the Palaeogene to the southern hemisphere. It took more than 100 years until the true affinity to *Myrica* was proved by Rüffle (1976) and Mai & Walther (1978) based on cuticular features. Leaflets of *Engelhardia orsbergensis* which have been sometimes mistaken for *M. longifolia* differ by their smaller size, lower length/width ratio of the lamina, and the more or less asymmetrical leaf base which is not decurrent. Due to the narrow leaf form and the tiny often spinose teeth, *M. longifolia* is of xerophytic appearance.

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21 macroscopic leaf traits are stored in *Digiphyll*

#	trait code	trait: charcters state
1	A-1.2	petiole: present
2	A-2.1	leaf organisation: simple
3	A-3.5	leaf shape: linear
4	A-4.1	leaf base angle: acute
5	A-5.1	leaf base shape: without basal extension
6	A-5.1.6	leaf base shape, without basal extension: decurrent
7	A-6.1	leaf apex angle: acute
8	A-7.1	leaf apex shape: attenuate (straight)
9	A-8.2	leaf margin: toothed
10	A-8.2.2	leaf margin, toothed: dentate
11	A-9.1.1	leaf teeth, order number of teeth: simple order (first order)
12	A-9.2.2	leaf teeth, tooth density: not dense
13	A-9.3.1	leaf teeth, tooth size: small
14	A-9.4.1	leaf teeth, tooth apex shape: acute
15	A-9.5.1	leaf teeth, tooth sinus shape: acute
16	B-1.1	primary vein framework: pinnate
17	B-2.1	secondary vein framework: 2° veins reach margin
18	B-2.1.1	secondary vein framework, 2° veins reach margin: craspedodromous
19	B-3.2	intramarginal vein: absent
20	B-4.2	intersecondaries: absent
21	B-5.2	tertiary vein framework: reticulate

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

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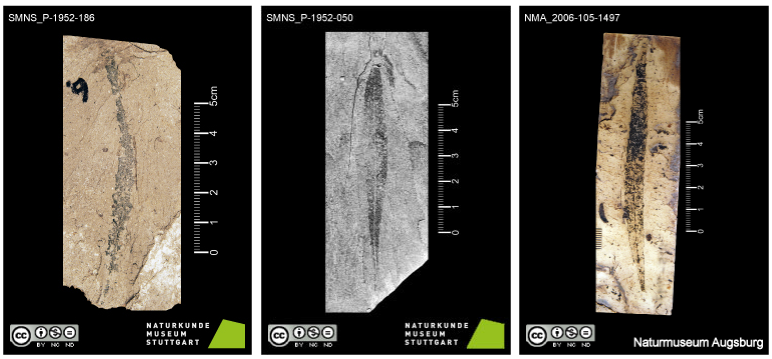
13 microscopic leaf traits are stored in *Digiphyll*

#	trait code	trait: charcters state
1	C-1.2	adaxial cuticle, thickness: medium
2	C-3.1	adaxial cuticle, anticline-course: straight
3	C-3.2	adaxial cuticle, anticline-course: rounded
4	C-6.2	adaxial cuticle, trichome: present
5	C-8.2	adaxial cuticle, trichome base cells: modified
6	C-8.2.1	adaxial cuticle, trichome base cells, modified: thickened
7	C-10.2	adaxial cuticle, trichome base, foot: two-celled
8	C-10.3	adaxial cuticle, trichome base, foot: more than two cells
9	E-1.1	abaxial cuticle, thickness: delicate
10	E-14.1	abaxial cuticle, stomatal complex type: anomocytic

#	trait code	trait: charcters state
11	E-20.1	abaxial cuticle, stomatal ledges: weakly cutinised
12	E-20.2	abaxial cuticle, stomatal ledges: conspicuous
13	E-21.2	abaxial cuticle, front cavity: elliptic

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

Fossil images



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