***Daphnogene cinnamomifolia* (Brongniart in Cuvier) Unger 1850 (Lauraceae)**

Leaf description

- **morphology:**
  leaves coriaceous to medium thick, very variable in size; **organisation:** simple; **petiole:** present; **shape:** oblong to slender or broad elliptic to somewhat obovate; **leaf base:** angle acute, base shape narrow or broad cuneate to somewhat rounded; **leaf apex:** angle acute, shape often acuminate or straight; **margin:** entire; **1°-vein framework:** suprabasal acrodromous, the lateral main veins originating alternately to suboppositely from the central main vein running into the apical third or quarter of the lamina; **2°-vein framework:** weak brochidodromous; **3°-vein framework:** percurrent, sinuous, horizontal, almost perpendicular to the central main vein.
- **cuticle:**
  adaxial cuticle thicker than abaxial one, hypostomatic; **adaxial cuticle:** anticlines straight, curved to moderately undulate, cell outlines polygonal, about 15–35 µm across; glabrous to trichome bases restricted to veins or scattered also in intercostal areas, shape as on abaxial cuticle (see below); mesophyllous secretory bodies rounded to lense-shaped, sometimes frequent, 25–50 µm in diameter; **abaxial cuticle:** usually more delicate, thus more rarely preserved, anticlines straight, curved to undulate, ordinary cells polygonal, somewhat smaller than adaxially, 12–35 µm across, stomatal complexes brachyparacytic, shape oval to rhomboidal, often asymmetric, 10–20 µm long, subsidiary cells hardly delimited from guard cells, mainly not staining, stomatal ledges indistinct, stomatal pore short, slit-like; trichome bases from almost lacking to scattered to rather dense, either at the plane of the cuticle surface or raised above it, trichome-base cells more or less distinctly radially arranged, thickened especially towards the trichome pore, forming the distinct poral rim, trichome pore rounded to polygonal; trichomes only exceptionally preserved, one-celled, long filaments.

Palecology

- **habitat:** probably in a wide range of habitats from wetlands to mesophytic forests
- **vegetation type:** warm temperate broad-leaved evergreen to mixed mesophytic forests
- **life form:** tree or shrub
- **foliage persistence:** evergreen leaves
- **flower ecology (pollination):** probably animal-pollinated (zoophilous)
- **fruit ecology (dispersal):** animal-dispersed (zoochorous), fleshy fruits

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Stratigraphy / Distribution

- **stratigraphy:** Upper Eocene, Lower Oligocene to Lower Miocene
- **distribution:** Europe at least unto Central Asia (Kazachstan)

Miscellaneous

- **synonyms:** *Daphnogene lanceolata*. Due to the uncertainities of the assignment within the laurel family, such leaves were referred also to *Cinnamomophyllum* and *Cinnamomum*.
- **modern relationship:** *Cinnamomum* SCHAEFF.

- **remarks:** *D. cinnamomifolia* is one of the most common taxa in the Oligocene to lowermost Miocene. Most characteristic features are the suprabasal acrodromously organised main veins. Due to the lack of differential diagnostic features, the separation of *D. cinnmomifolia*, *D. cinnamomea* and *D. polymorpha* is mainly artificially based on the age of the fossil-bearing sediments. Larger leaves also treated as *C. cinnamomifolia* forma *cinnamomifolia* are less leathery than smaller ones called *C. cinnamomifolia* forma *lanceolata*. Usually leaves of the type forma *cinnamomifolia* are interpreted as shade leaves while those of forma lanceolata are regarded as sun leaves. The more leathery leaves of the type forma *lanceolata* are far more common in the fossil record than those of forma *cinnamomifolia* because they probably were more resistant to decay.

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23 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-3.1	leaf shape: elliptic
5	A-3.3	leaf shape: ovate
6	A-4.1	leaf base angle: acute
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-7.2	leaf apex shape: acuminate
13	A-8.1	leaf margin: untoothed
14	B-1.2	primary vein framework: palmate
15	B-1.2.3	primary vein framework, palmate: acrodromous
16	B-1.2.3.2	primary vein framework, palmate, acrodromous: suprabasal acrodromous
17	B-2.3	secondary vein framework: 2° veins form loops and do not reach margin
18	B-2.3.1	secondary vein framework, 2° veins form loops and do not reach margin: brochidodromous
19	B-3.2	intramarginal vein: absent
20	B-4.1	intersecondaries: present
21	B-4.2	intersecondaries: absent
22	B-5.1	tertiary vein framework: percurrent
23	B-5.1.3	tertiary vein framework, percurrent: mixed

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

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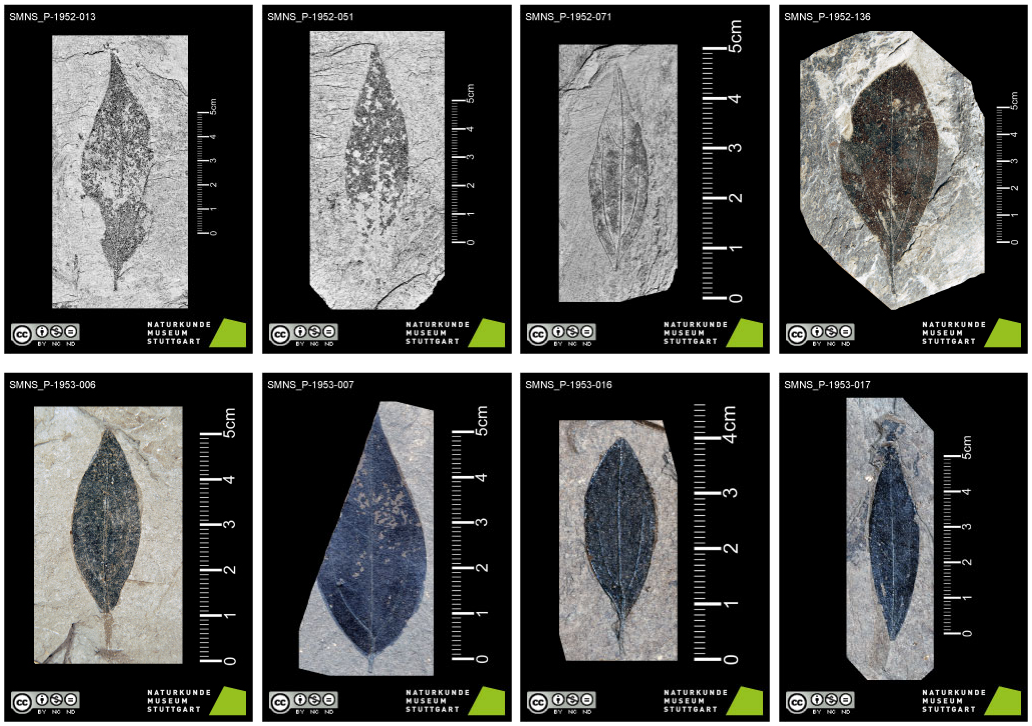
9 microscopic leaf traits are stored in *Digiphyll*

#	trait code	trait: charcters state
1	C-3.3	adaxial cuticle, anticline-course: undulate
2	C-3.3.1	adaxial cuticle, anticline-course, undulate: U-shaped
3	D-1.2	mesophyllous secretory cells: present
4	D-1.2.1	mesophyllous secretory cells, present: sporadic
5	D-1.2.2	mesophyllous secretory cells, present: dense

#	trait code	trait: charcters state
6	E-3.3	abaxial cuticle, anticline-course: undulate
7	E-3.3.1	abaxial cuticle, anticline-course, undulate: U-shaped
8	E-14.6	abaxial cuticle, stomatal complex type: paracytic
9	E-17.3	abaxial cuticle, stoma position relative to epidermis: sunken

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

Fossil images



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