

*Laurus abchasica* (Kolakovskii & Shakryl) Ferguson 1974 (Sapindaceae)

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**Leaf description**

- **morphology:** leaves coriaceous; **organisation:** simple; **petiole:** present, short; **shape:** ovate, (narrow) elliptic to oblong up to 120 mm long, 20–40 mm or even up to 80 mm wide; **leaf base:** base angle acute to obtuse, base shape convex or almost straight; **leaf apex:** apex angle acute, apex shape acute to acuminate; **margin:** untoothed; **1°-vein framework:** primary vein network pinnate, midvein prominent, straight to a bit bent; **2°-vein framework:** secondaries brochidodromous, widely spaced, arising at angles of usually about 45–70°, running in wide arches towards the margin; **3°-vein framework:** tertiaries and higher order veins reticulate, areoles lacking freely ending veinlets.
  - **cuticle:**  
**adaxial cuticle:** thick, abaxial one medium thick, both glabrous except for sparse simple trichome bases on major veins; anticlines strongly U- to Omega-shaped, undulate, cell outlines about 20–45 µm across appearing strongly geared except above veins; **mesophyll:** roundish secretory cells present; **abaxial cuticle:** stomatal complexes paracytic, randomly distributed, distinctly rhomboidal in shape, about 15–25 (rarely up to 35 µm) long, subsidiary narrow to broad triangular in shape, front cavity narrow spindle-shaped.
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**Paleocology**

- **habitat:** broad-leaved evergreen forests to mixed-mesophytic forests. Due to its accessorical character, it probably was more an element of mesophytic forests than of wetland habitats.
  - **vegetation type:** ?
  - **life form:** tree or shrub
  - **foliage persistence:** evergreen leaves
  - **flower ecology (pollination):** animal-pollinated (zoophilous)
  - **fruit ecology (dispersal):** animal-dispersed (endozoochorous)
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**Stratigraphy / Distribution**

- **stratigraphy:** Oligocene to Late Miocene/Pliocene
  - **distribution:** Central Europe; rare in the Oligocene: Flörsheim, Rauenberg/Frauenweiler, Rhine Graben (Germany) (Kvaček 2004), (Kovar-Eder 2016); common in the European Early to (Middle) Miocene: e.g., Bełchatów (Poland) (Worobiec 2007), Cypris Clay flora, Bohemia (Bůžek et al. 1996), Oberdorf (Austria) (Kovar-Eder & Meller 2001), Kreuzau (Germany) (Ferguson 1971, 1974); very rare already in Middle Europe during the late Miocene: Mataschen (Austria) (Kovar-Eder & Hably 2006); in the late Miocene/Pliocene occurring in southern regions of Europe unto the Black Sea region.
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**Miscellaneous**

- **synonyms:** –
- **modern relationship:** A close affinity to *Laurus nobilis* L. and *Laurus azorica* (SEUB.) FRANCO is concluded by Ferguson (1974). While *L. nobilis* is wide-spread in the Mediterranean, *L. azorica* thrives

from the Azores to the Canary Islands and Marocco. It is a character species of the Laurisilva on the Canary Islands and Azores.

- **remarks:** Leaves of this laurel usually are not numerous in individual plant assemblages and are rarely preserved completely; very often we deal only with fragments. The unambiguous identification requires the cuticle structures. First this taxon was assigned to the morphogenus *Laurophyllum* because the differentiation between modern genera of the Lauraceae is not trivial. It was Ferguson (1974) who was able to assign this taxon to the modern genus *Laurus*.

### 23 macroscopic leaf traits are stored in *Digiphyll*

#	trait code	trait: charcters state
1	A-1.2	petiole: present
2	A-1.2.1	petiole, present: short
3	A-2.1	leaf organisation: simple
4	A-3.1	leaf shape: elliptic
5	A-3.3	leaf shape: ovate
6	A-3.4	leaf shape: oblong
7	A-4.1	leaf base angle: acute
8	A-4.2	leaf base angle: obtuse
9	A-5.1	leaf base shape: without basal extension
10	A-5.1.2	leaf base shape, without basal extension: rounded
11	A-5.1.6	leaf base shape, without basal extension: decurrent
12	A-6.1	leaf apex angle: acute
13	A-7.1	leaf apex shape: attenuate (straight)
14	A-7.2	leaf apex shape: acuminate
15	A-8.1	leaf margin: untoothed
16	B-1.1	primary vein framework: pinnate
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-2.3.2	secondary vein framework, 2° veins form loops and do not reach margin: weak brochidodromous
20	B-3.2	intramarginal vein: absent
21	B-4.2	intersecondaries: absent
22	B-5.1	tertiary vein framework: percurrent
23	B-5.1.1	tertiary vein framework, percurrent: opposite

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

### 14 microscopic leaf traits are stored in *Digiphyll*

#	trait code	trait: charcters state
1	C-1.3	adaxial cuticle, thickness: thick
2	C-3.3	adaxial cuticle, anticline-course: undulate
3	C-3.3.1	adaxial cuticle, anticline-course, undulate: U-shaped
4	C-3.3.3	adaxial cuticle, anticline-course, undulate: Omega-shaped
5	D-1.2	mesophyllous secretory cells: present
6	D-1.2.1	mesophyllous secretory cells, present: sporadic

#	trait code	trait: charcters state
7	D-1.2.1.1	mesophyllous secretory cells, present, sporadic: globular
8	E-1.2	abaxial cuticle, thickness: medium
9	E-3.3	abaxial cuticle, anticline-course: undulate
10	E-3.3.1	abaxial cuticle, anticline-course, undulate: U-shaped
11	E-3.3.3	abaxial cuticle, anticline-course, undulate: Omega-shaped
12	E-14.6	abaxial cuticle, stomatal complex type: paracytic
13	E-15.1	abaxial cuticle, stoma orientation: random
14	E-21.3	abaxial cuticle, front cavity: spindle-shaped

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

### Fossil images



### References

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