NATROLITE

Chemical formula: $Na_2[Al_2Si_3O_{10}] \cdot 2H_2O$

Crystal system: orthorhombic

Color in thin section: colorless

Form: fibers or long prismatic crystals, radial fibrous aggregates

Cleavage: perfect on {010} (parallel to the length of crystals)

Indices of refraction: $n_\alpha = 1.479 – 1.489$ $n_\beta = 1.476 – 1.491$ $n_\gamma = 1.485 – 1.501$

Birefringence: 0.006 – 0.012

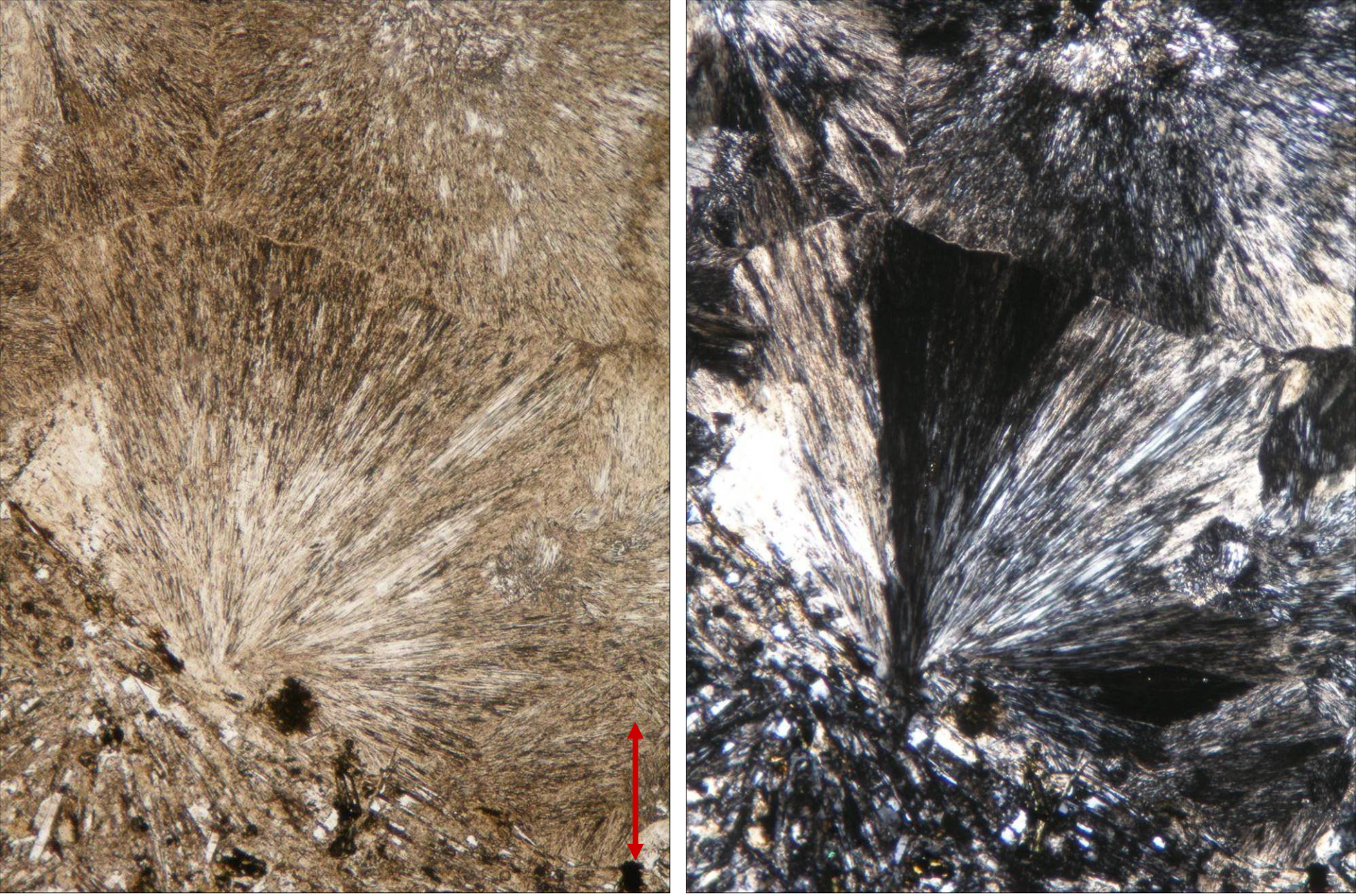
Optic sign: biaxial positive

Sign of elongation: positive

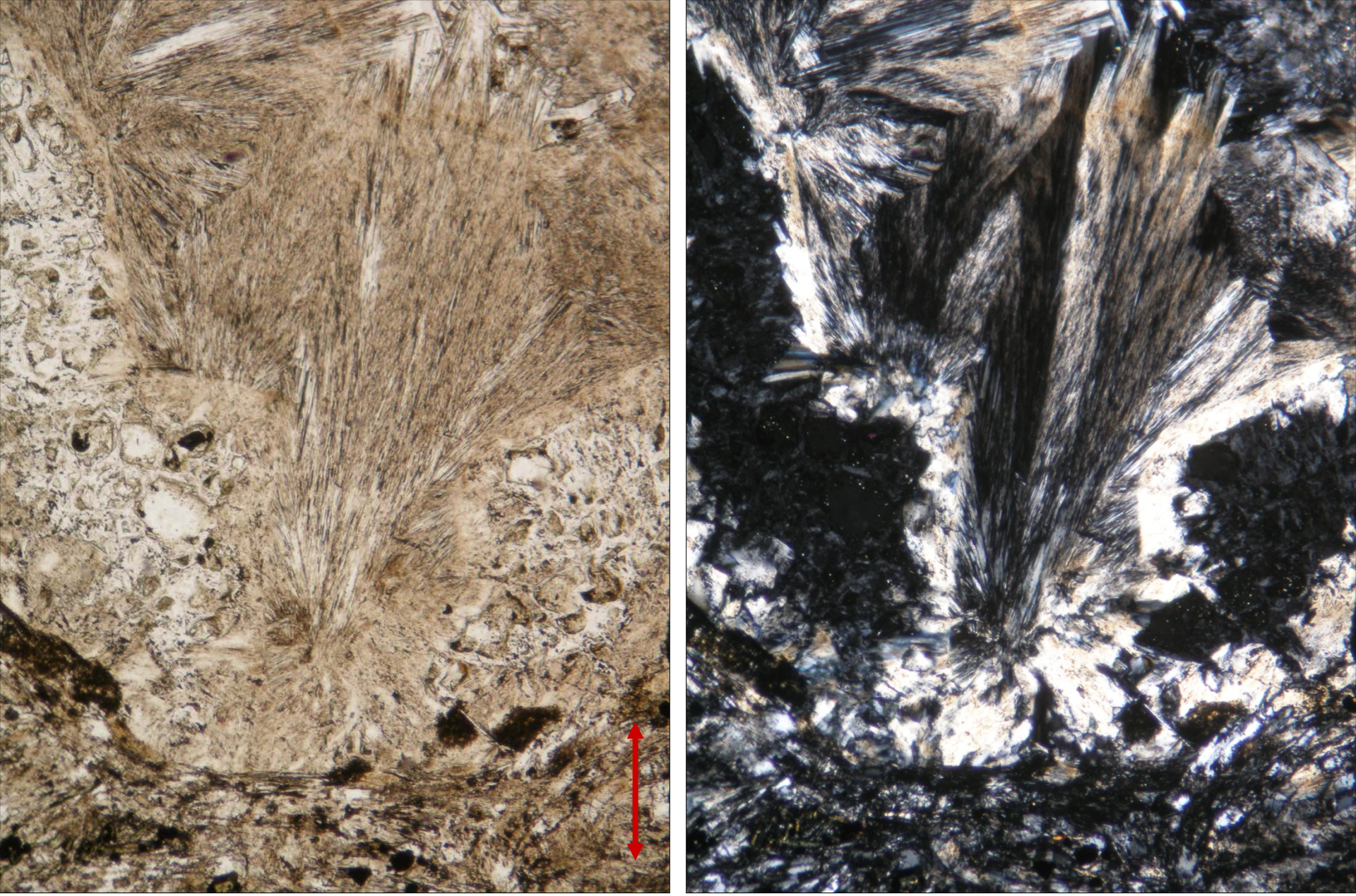
Alteration: may be altered to clay and other zeolites

Occurrence: in vesicles and cavities in phonolite, basalt and gabbro; sometimes as a primary mineral in the groundmass of phonolite

Similar minerals in thin sections: other zeolites (usually have inclined extinction, thomsonite has higher indices of refraction, mesolite has higher indices of refraction and shows lower birefringence of 0.002)



Natrolite as a vesicle filling in phonolite from Ústí nad Labem, the Czech Republic; PPL (left) and XPL (right). Width of fields of view is ca. 2.0 mm. Photo: JiZi.



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