

Intrusive Dikes and Strike-Slip Faults in Granite at Schoodic Point, Acadia National Park

Granite

Host rock at the Schoodic Point exposures represents the upper part of the Early Devonian Gouldsboro Granite.

Intrusive Dikes

The light colored homogeneous granite host rock at Schoodic Point is intruded by numerous distinctive crosscutting igneous dike intrusions. Compositions range from early syn-plutonic aplite and light gray porphyritic rhyolite to Mesozoic basalt in fine grained, porphyritic and diabase textures. These Mesozoic mafic dikes represent the first magma-filled fractures related to rifting and the break up of continents to form the Atlantic Ocean.

Schoodic Point

The Schoodic Point exposures are part of Acadia National Park and accessible from the parking area at the end of Park road.

0 50 100 200 Meters

Strike-Slip Faults

The granite host rock at Schoodic Point is also cut by small scale strike-slip faults as by narrow cm width darker zones of cataclasite, and spectacular coarse fault breccias with light granite fragments embedded in a darker fine grained cataclastic matrix. Fault zones cut early syn-plutonic aplite dikes and some of the rhyolite dikes with m-scale displacements. Both right and left lateral strike-slip faults are found in a pattern suggesting a Reidel shear model of fault zone development preserved in an early embryonic stage in the linkage growth of a throughgoing fault zone.

0 25 50 100 Meters