Serpentinite is California's official state rock! The diversity of California's natural environments includes over 1100 sq. ml of serpentinite outcrops - it is the largest in the country!



★ - TOUR DESTINATIONS

Serpentinite outcrops are largely distributed in the foothills of the Sierra Nevada and in the Coast Ranges from San Luis Obispo County north to the Oregon border.

Serpentinite is a metamorphic rock.

What does it mean?

In general, serpentinite formed through re crystallization (internal reorganization and substitution of iron) of pre-existing crystals, without going through a molten phase. In the simplest reaction, olivine and pyroxene, the two principal minerals of peridotite, a very heavy, dark ultramafic igneous rock, are converted to serpentine - a primary mineral in the serpentinite rock. To complete the brew it is necessary to add water:

MgSiO₄ (olivine)

+

MgSiO₂ (pyroxene)

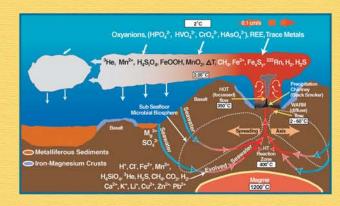
+

H₂O (water)

Mg₃Si₂O₅(OH)₄ (serpentine)



HOW AND WHERE DID SEPENTINITE COME FORM?



Serpentine is primarily
formed through the
hydration of olivine and
pyroxene, minerals which are
abundant in the sea-floor
crust. Much of the
serpentinization takes place
near to the spreading ridges,
where the rocks are still hot,
and there is well-developed
convection of sea water
through the new crust.

BUT HOW DID IT END

UP HERE
IN CALIFORNIA?