



Arizona Rocks 26

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The next foliated metamorphic rock (rocks that have platy or needle like minerals that line up from the pressure) will be schist. Schist differs from phyllite in that you can see the individual mineral grains in schist. Schist will break in flat pieces, but because of the larger crystals they will be rougher than phyllite. The size of the crystals in the schist can range from just visible to inches across. Because the minerals are visible and they can be identified, often the name of the mineral/minerals present is used to modify the rock name. For example muscovite schist, biotite schist, and muscovite garnet schist are commonly used names.

The oldest rocks (Precambrian) in Arizona and the basement rock for the state is schist. There are three general formation names used. In the north and the Grand Canyon is the Vishnu schist, in the central part of the state is the Yavapai schist, and in the south from Phoenix to Bisbee is the Pinal schist. From north to south the rocks become younger in age. In the Phoenix Mountains most of the metamorphic rocks are fine-grained (phyllite) but there are some coarser rocks around Piestewa Peak that the geologists call quartz mica schist. Remember as you travel around Arizona most of the schist formations are standing vertical making them easy to recognize.



Pinal schist (quartz mica schist) from the San Tan Mountains, note the rough surface and the reflections from the mica crystals.



Vishnu schist in the Grand Canyon, note the vertical structure.



Staurolite cross (twin crystal) in schist from New Mexico, staurolite crosses are reported from several areas around Cleator, AZ, but are not very common.