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Are Petroglyphs Markers for Frontier Boundaries or Directional to Raw Material Resources?

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ARE PETROGLYPHS MARKERS FOR FRONTIER BOUNDARIES OR DIRECTIONAL TO RAW MATERIAL RESOURCES?

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The Shawangunk, NY region is known for rich mineral resources: anomalous concentrations of quartz crystals; native silver; silver, copper and zinc sulfides; and minimal quantities of native gold. The Shawangunks also host Native American petroglyphs carved into local bedrock. Although the Shawangunks are rich in metallic ores and semiprecious minerals, the entire range is sorely deficient in chert and other raw materials used for prehistoric subsistence. Despite the lack of raw materials for subsistence needs, archaeological tools found in the area are strikingly similar in raw-material type, as well as general morphology, to quarry-extraction tools discovered in the adjacent Wallkill Valley. The Wallkill Valley contains hundreds of prehistoric chert quarries occurring in Cambro-Ordovician carbonates.

Recovered objects are fashioned from metaconglomerates, arkoses, quartzites, and argillites occurring within the graded sequences of the middle to upper Silurian Shawangunk Formation. The formation extends from Rosendale, NY southward into Virginia and unconformably overlies shales and graywackes of the Ordovician Martinsburg Formation. The Shawangunk Ridge in the vicinity of New Paltz, NY consists of gray to white conglomerate and quartzite, with milky quartz pebbles and rose quartz in the upper part of the formation. It pinches out near Binnewater, NY. Tools weigh up to 10 kg and are battered on all surfaces. Some surfaces show pitting, grinding and abrasion. Ruptures occurring along joint surfaces, or joint-bedding intersections, are flaked backward to prepare a wedge-like impact surface. The full complement of rock types occurring within the graded sequence are exploited for their durability in production of tools. Morphologically the objects fit categorically into the chain of operation of lithic production described for Wallkill Valley chert quarries.

Considering the paucity of subsistence raw material in the Shawangunks, what does the richness of petroglyphs and extraction tools signify? Do petroglyphs represent

territorial/frontier boundaries or limits of raw-material resources? Perhaps the petroglyphs mark the entranceway to sources of commodity minerals employed for personal adornment, ideological activities or internment.

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Recent Advances in Archaeological Geology (Posters)
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