

‘Olmec Blue’ and Formative jade sources: new discoveries in Guatemala

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The discovery of jadeite rocks (jadeitites) in Guatemala in 1954 led to the recognition of the Motagua River Valley as a Maya jade source. While abundant and accessible, what is produced today for the tourist trade, mainly between Estancia de La Virgen and Teculután (Harlow, 1994), is mostly opaque and dull-colored. It scarcely resembles the translucent and colorful "Olmec" blue-green jade found in Formative horizons in Mexico. This qualitative disparity has led to a search for Olmec jade sources elsewhere in Mesoamerica.

The Sierra de las Minas and the highlands south of the Motagua River have recently yielded some remarkably-translucent, fine-grained jadeitites that closely resemble those worked in Formative times. Geological reconnaissance has expanded the known jade-bearing area at least six-fold.

The first deposits examined are at an elevation of ~1,750 meters, 13 kilometers north of the limits of detailed geological mapping, on Cerro Bandera Perdida (see FIGURE 1). An ancient, and possibly trade-route related, dry-stone trackway parallels the 1,700 meter contour for at least four kilometers and leads to the mine area at Los Cedros.

Alluvial jade was also found 8 kilometers further northwest at Finca Santa Clara on the Río Blanco near the intersection of Alta Verapaz and El Progreso. Another jade deposit was visited west of the town of Río Hondo. These sources extend the described jade-bearing zone 10 km north and 18 km east.

Some 10 km south of the Motagua, alluvial jadeite found in the Río El Tambor is significant for its origin across a major fault, long considered the southern geological limit for jadeite occurrence. In 1998 the floodwaters of Hurricane Mitch exposed much new jade which has been traced upriver into the department of Jalapa, at elevations from 600 to 1,400 meters. In 2001 more jadeitites and related rocks were found in the quebradas of the Río Jalapa and at an outcrop near La Ceiba, all lying in east-west running bands of serpentinite. This southern band of the Guatemalan jade zone extends

18 km south of the northern zone and has the same east-west extent

Matching jade artifacts with jadeite sources has been a problematic endeavor. Chemical composition has been used for sourcing many lithic materials, but jadeitites are inherently inhomogeneous which precludes matching by whole-rock chemical analysis (see Lange, 1993). Multivariate trace-element systematics shows promise but a statistically useful array of Olmec artifacts or potential source materials have yet to be measured.

Minor mineral constituents are better than whole-rock composition for sourcing, because they do not get lost in the noise of whole-rock analysis. Minor paragonite or barium-rich muscovite mica and titanite are this fingerprint for most Guatemalan jadeitites and Mesoamerican jades. However, for a jadeite source material to be considered the counterpart of one exploited in the Formative period, it must also share the visual characteristics of Olmec jade. These visible internal features, such as globular clusters of whitish secondary minerals are further identifying fingerprints that reflect the unique geological history of each deposit.

Some of the recently recovered jadeitites have the combination of composition, minor minerals, and visual characteristics (details to be reported elsewhere; Harlow *et al.*, in prep.) that point to these newly discovered (or rediscovered) deposits as excellent candidates for an "Olmec-blue" jade source.

FIGURE 2 shows polished surfaces of jadeitites, retrieved from southern highland rivers, and a similar Olmec jade from the Mesoamerican Collection of the AMNH. Polished specimens from the Río Jalapa and Carrizal Grande (FIGURE 3) illustrate that Guatemala's new (or newly rediscovered) mines are again producing jades of the quality and color that figured in long-range Formative trade some 3,000 years ago.

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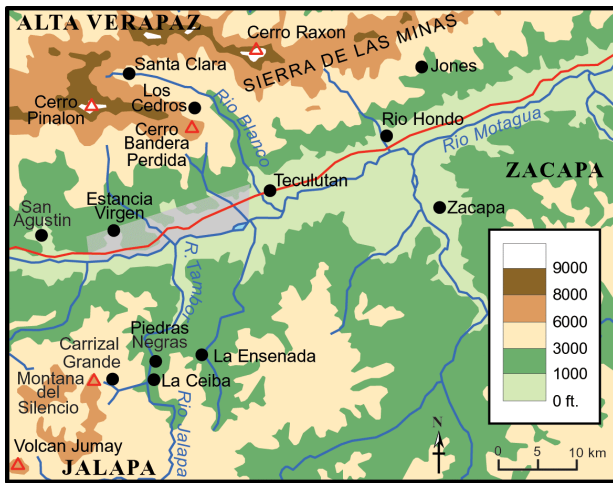


Figure 1. Map of central Motagua Valley in Guatemala, with previously recognized jade-bearing zone shown in grey.

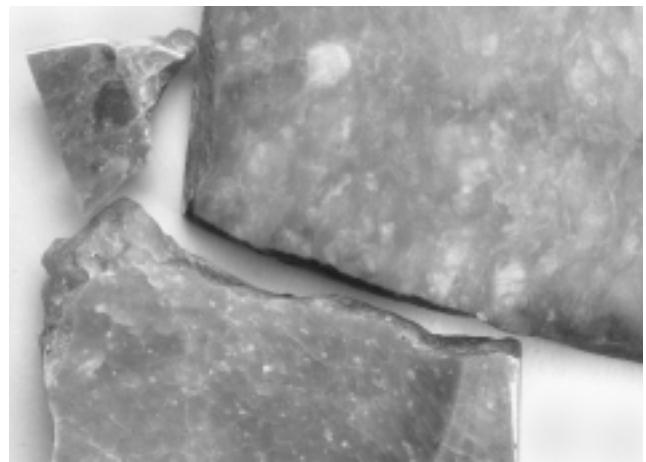


Figure 2. The top two pieces of jadeite are recent finds from Río Jalapa drainage and the bottom is a fragment of an Olmec-style jade dish (AMNH 30/10359), 2³/₄ in. across.

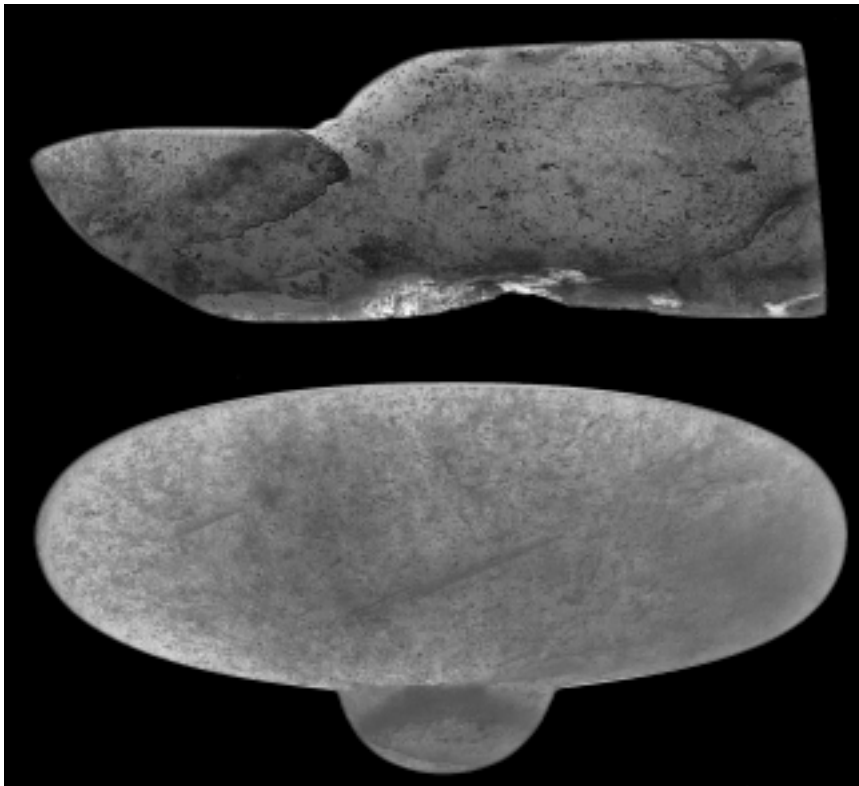


Figure 3. The upper slice of emerald-green-edged blue jadeite (3 mm thick x 6.5 cm wide) is from the upper Río El Tambor; the lower piece, cut and polished into a wing pendant 6 mm thick, is from Quebrada del Mico, Carrizal Grande, Jalapa.

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