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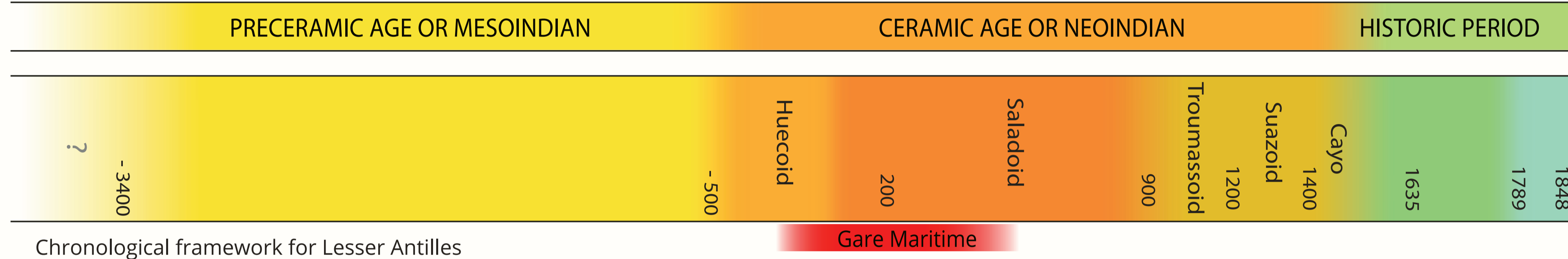
Raman spectroscopy for the mineral identification of precolumbian lapidary products in Basse-Terre (Guadeloupe, French West Indies)

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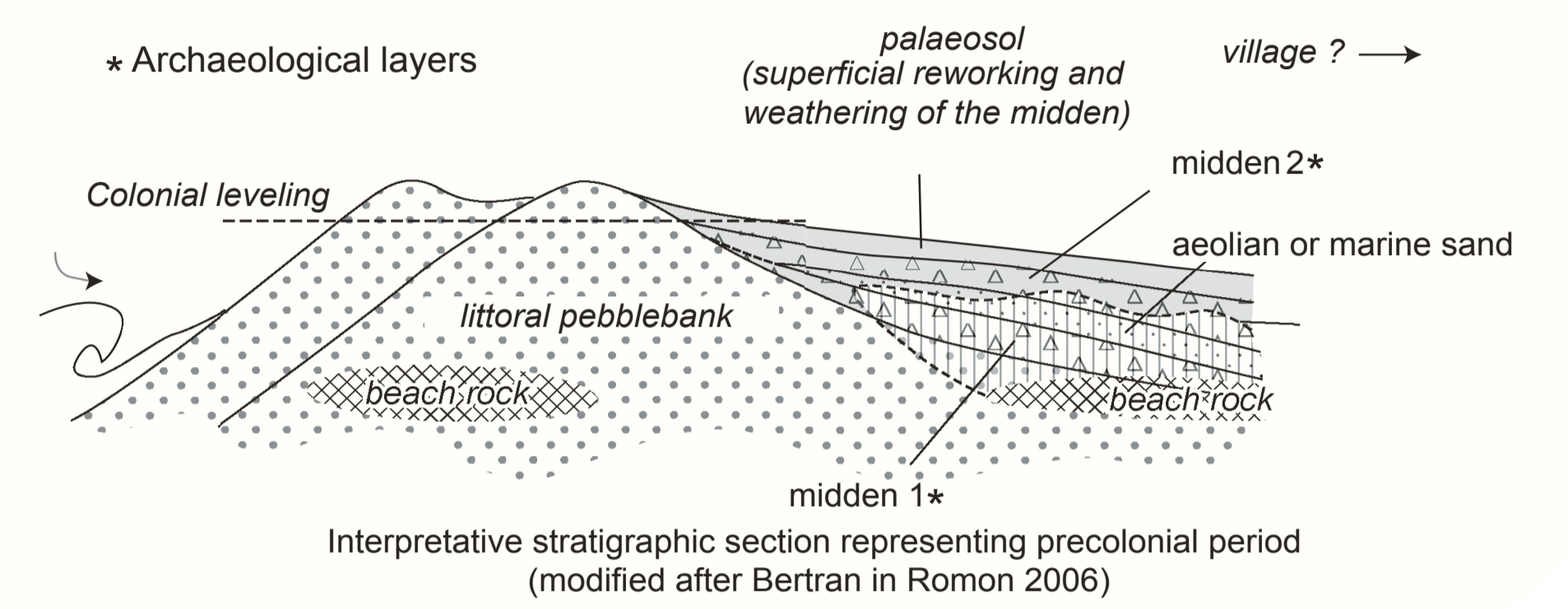
1) UMR 5199 PACEA, Univ Bordeaux-CNRS-MCC; 2) UMR 8233 MONARIS, Sorbonne Univ-UPMC-Univ Paris 6-CNRS; 3) DAC Guadeloupe, MCC; 4) UMR 8096 Archam, Univ Panthéon Sorbonne-CNRS-MCC; 5) INRAP; 6) UMR 5608 TRACES, Univ Toulouse 2-CNRS-MCC.

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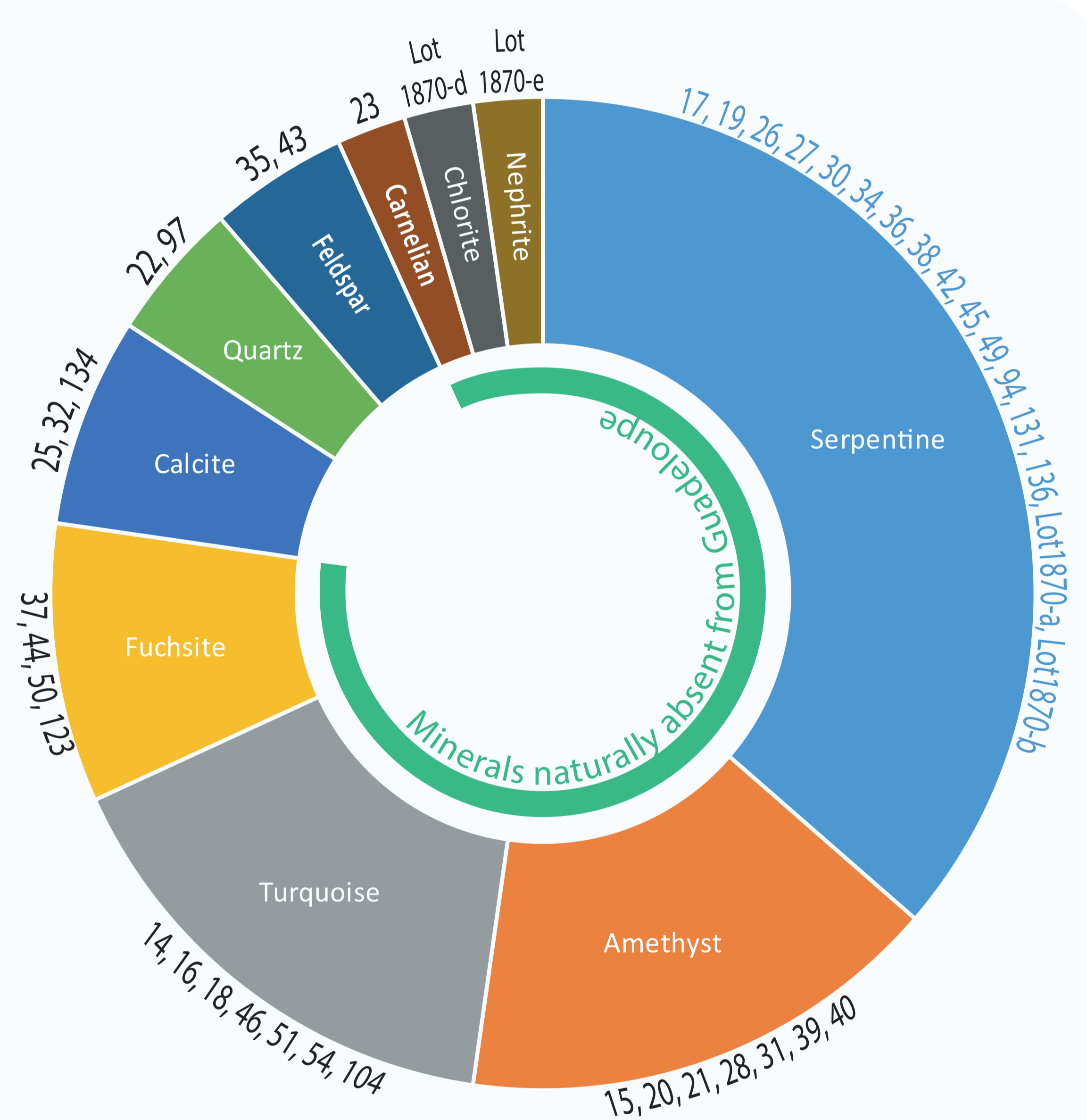
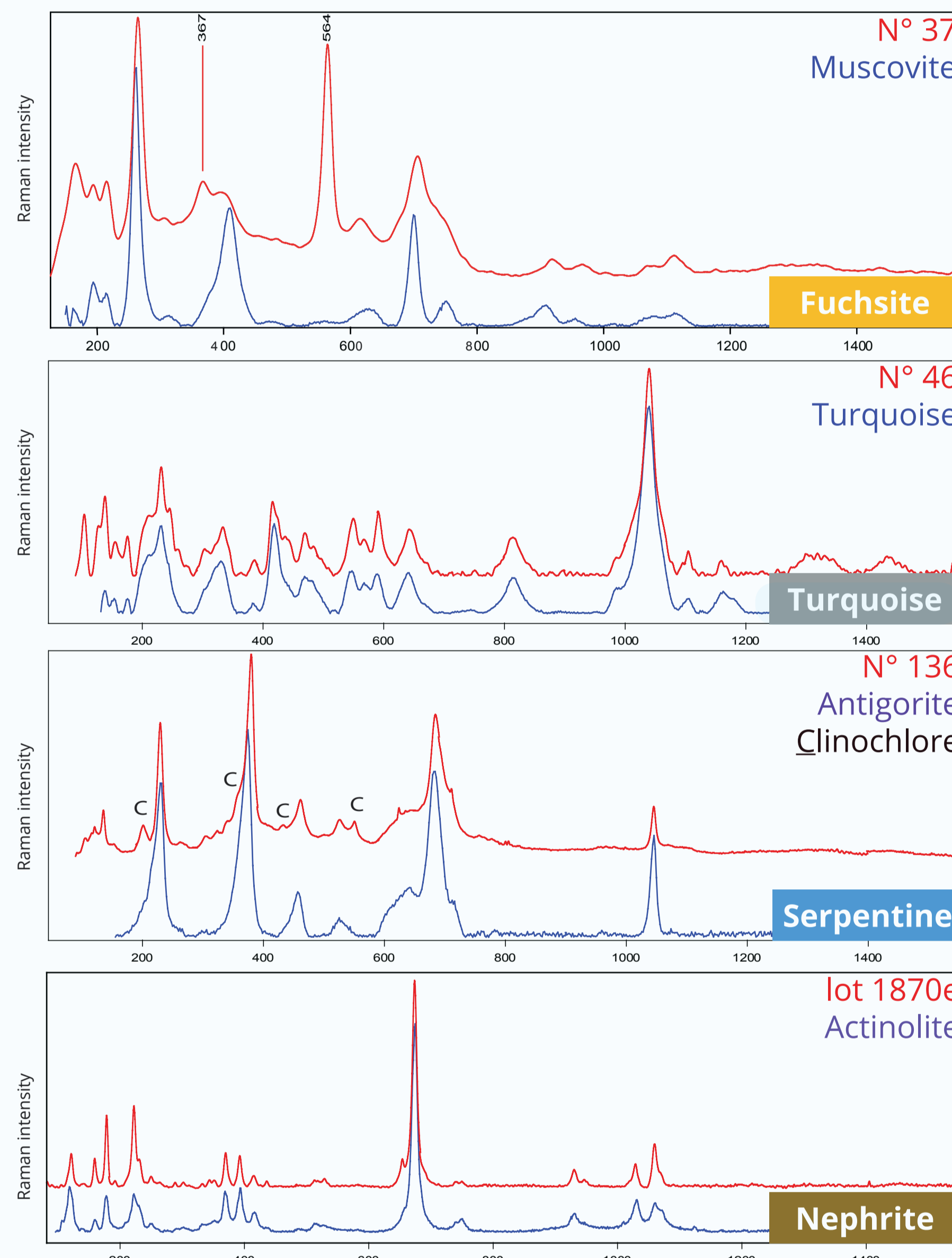
Many archaeological sites have yielded mineral beads and pendants in the Lesser Antilles during the past decades. These special artifacts have been the basis of numerous hypothesis regarding networks and even sociopolitical organization. Nevertheless, it remains actual that, as Roobol & Lee (1976) already pointed out, precise greenstone attribution «could provide an estimate of inter-island trade or migration within the Greater Antilles» and it does stand for Lesser Antilles as well. The preventive archaeological excavations of «Gare Maritime» in Guadeloupe (Paulet-Locard and Chancerel, 2005, Romon, 2006) brought to light numerous lapidary artifacts discovered in the midden deposits of this coastal Early Ceramic Age site.



Chronological framework for Lesser Antilles



Interpretative stratigraphic section representing precolonial period (modified after Bertran in Romon 2006)



- ✓ Large diversity of minerals
- ✓ Exotic minerals dominant
- ✓ High input from Raman spectroscopy to greenstones determination

	Quartz	Amethyst	Serpentine	Fuchsite	Turquoise	Calcite
raw material, flakes	absent	41	38, 94, 131	absent	absent	absent
blanks	disc 97, ? 23 (carnelian)	cylinder 28	"grain of rice" 26, 136, disc 42, "drop" 19, 17, 27, 34	absent	disc 16, ?	absent, "drop" 25, 134
drilled	15, ?	?	152, ?	?	absent, figurative 46, ?	absent, ?
finished beads and pendants	discoid 151, cylindrical 39, 22	discoid 20, barrel 31, 40, 21	discoid 36, 45, 49	sub-spherical 50, figurative 37, 44	discoid 14, 104, cylindrical 18	discoid 32, ?

- It remains difficult to source these materials due to lack of referentials and geological knowledge of the Caribbean region
- Comparison with other sites shows differences in proportions and a need for greenstone precise attribution by non-invasive means
- Techniques involved in drilling such quartz beads remain unknown in this archaeological context missing metal and very hard minerals

- ✓ Variety of importation stages and local production

Paulet-Locard and Chancerel (2005). Basse-Terre, Gare Maritime, Diagnostic archéologique, Rapport d'opération, SRA Guadeloupe.
 Romon (2006). Fouille préventive de la Gare Maritime de Basse-Terre (Guadeloupe). Basse-Terre, Guadeloupe
 Roobol, M. J., & Lee, J. W. (1976). Petrography and source of some Arawak artifacts from Jamaica. In Proceedings of the 6th congress of the IACA. Guadeloupe.