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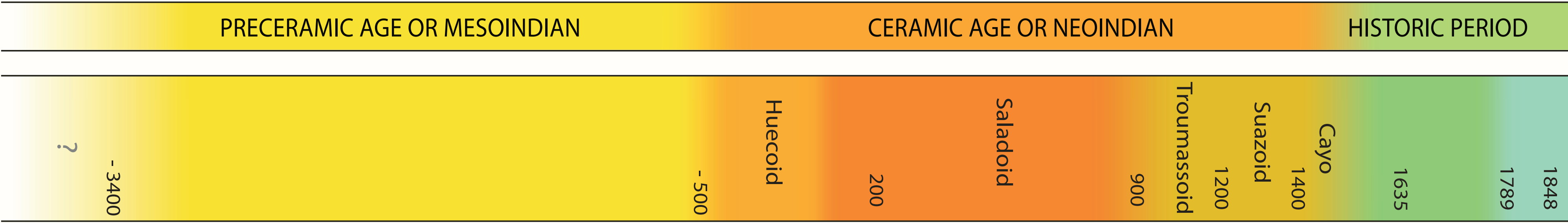
Raman spectroscopy for the mineral identification of precolumbian lapidary products in Basse-Terre (Guadeloupe, French West Indies)

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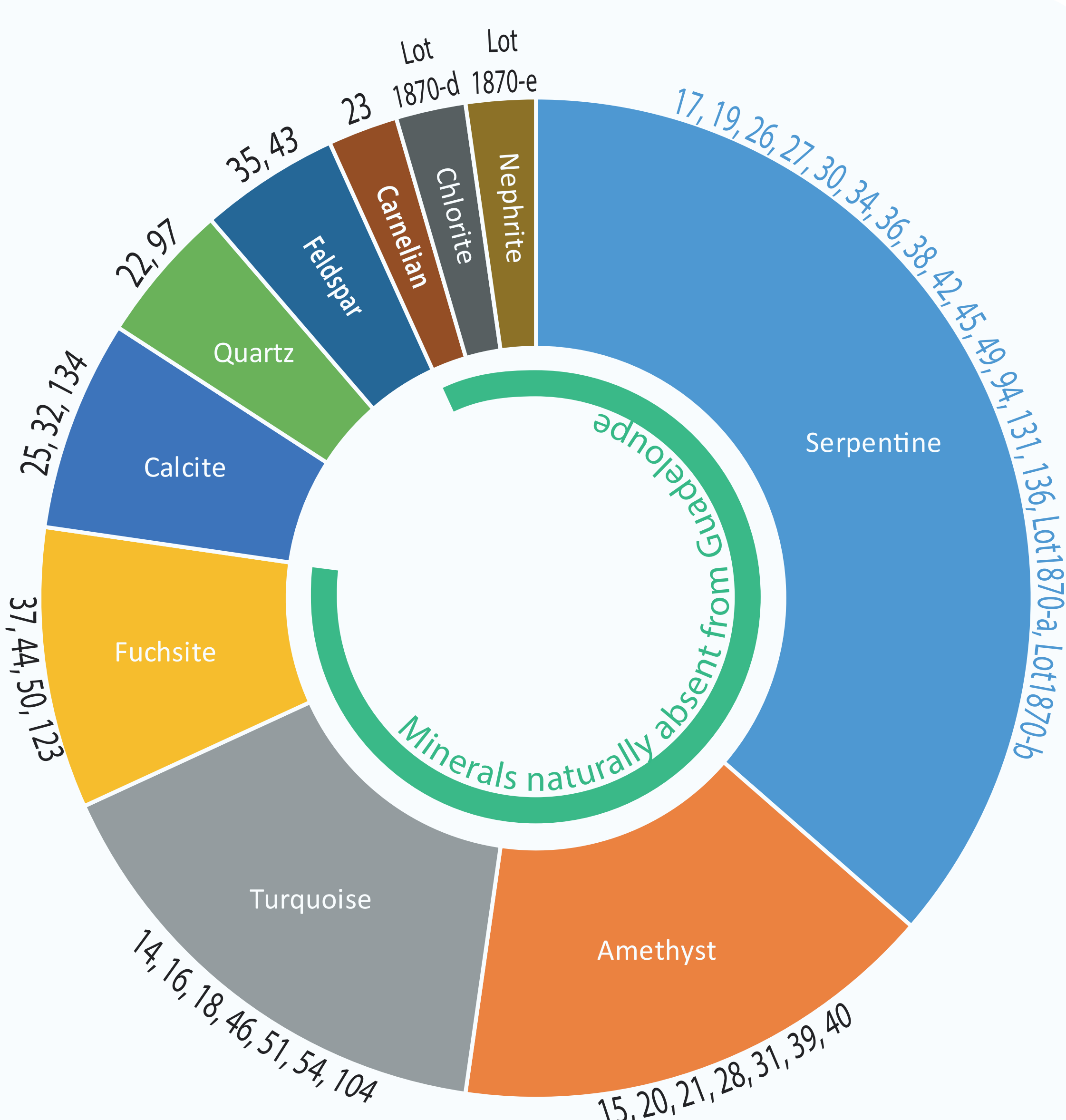
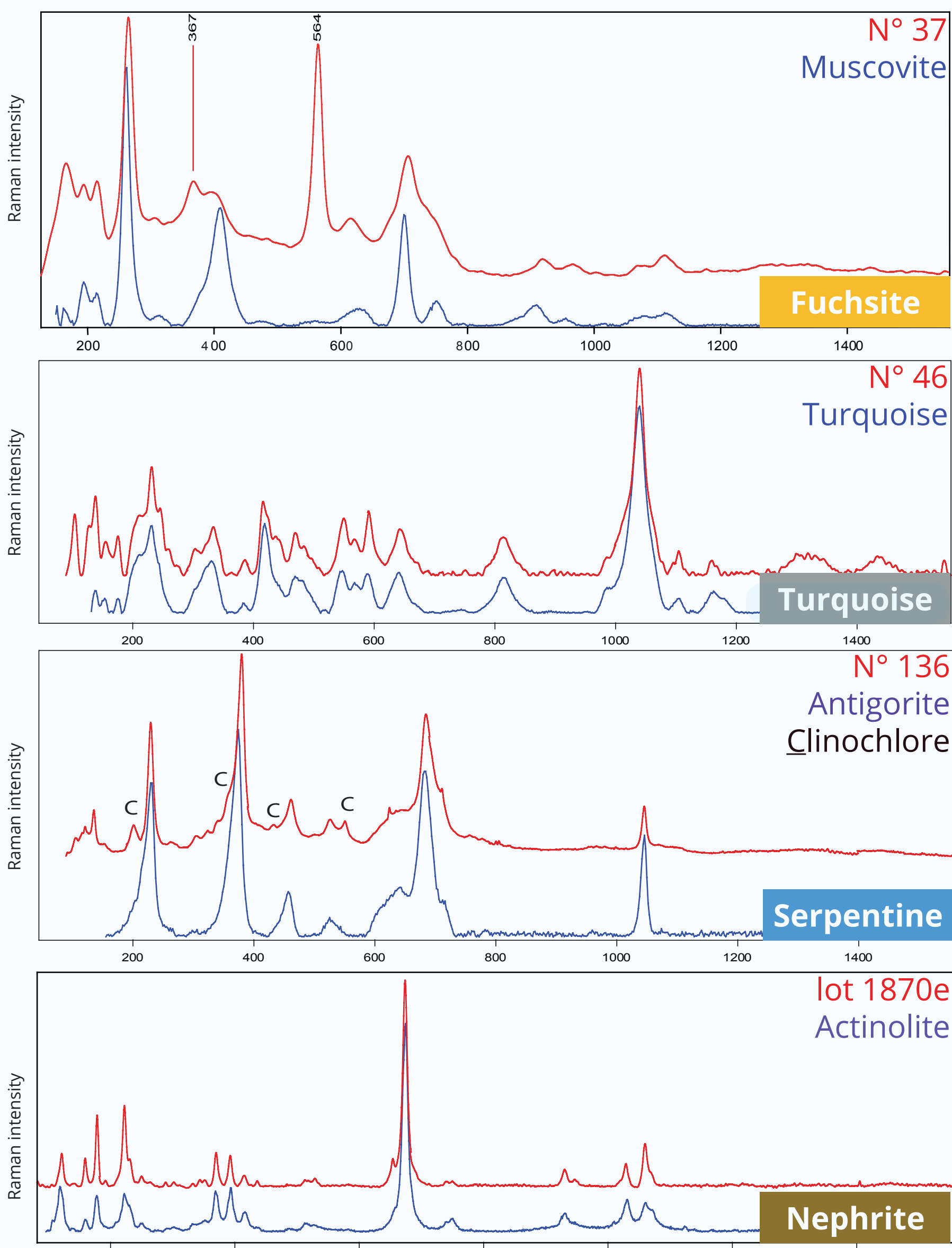
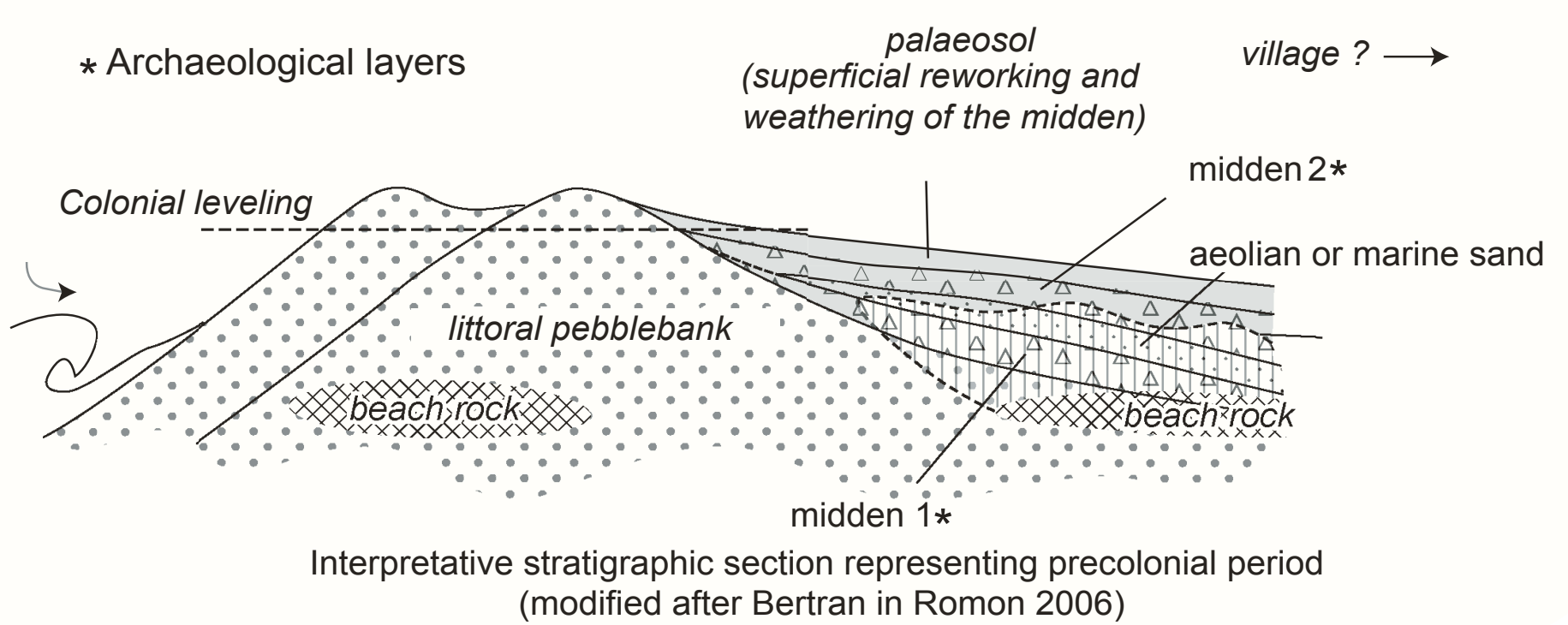
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Many archaeological sites have yielded mineral beads and pendants in the Lesser Antilles during the past decades. These special artifacts have been the basis of numerous hypothesis regarding networks and even sociopolitical organization. Nevertheless, 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 Ages site.



Chronological framework for Lesser Antilles



- ✓ 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, 34, 27, ?	absent, ?	disc 16, ?	absent, "drop" 25, 134
drilled	disc 15, ?	absent, ?	disc 152, ?	absent, ?	disc 46, ?	disc 32, ?
finished beads and pendants	discoid 151, 39, cylindrical 22	discoid 31, 40, 21, barrel 20	discoid 36, 45, 49, figuratives 30	sub-spherical 50, discoid 123, figurative 37, 44	discoid 14, 104, 18, conic 51, cylindrical 54	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.