

# Inlaid natural stones in Makrana Marble Taj Mausoleum of India

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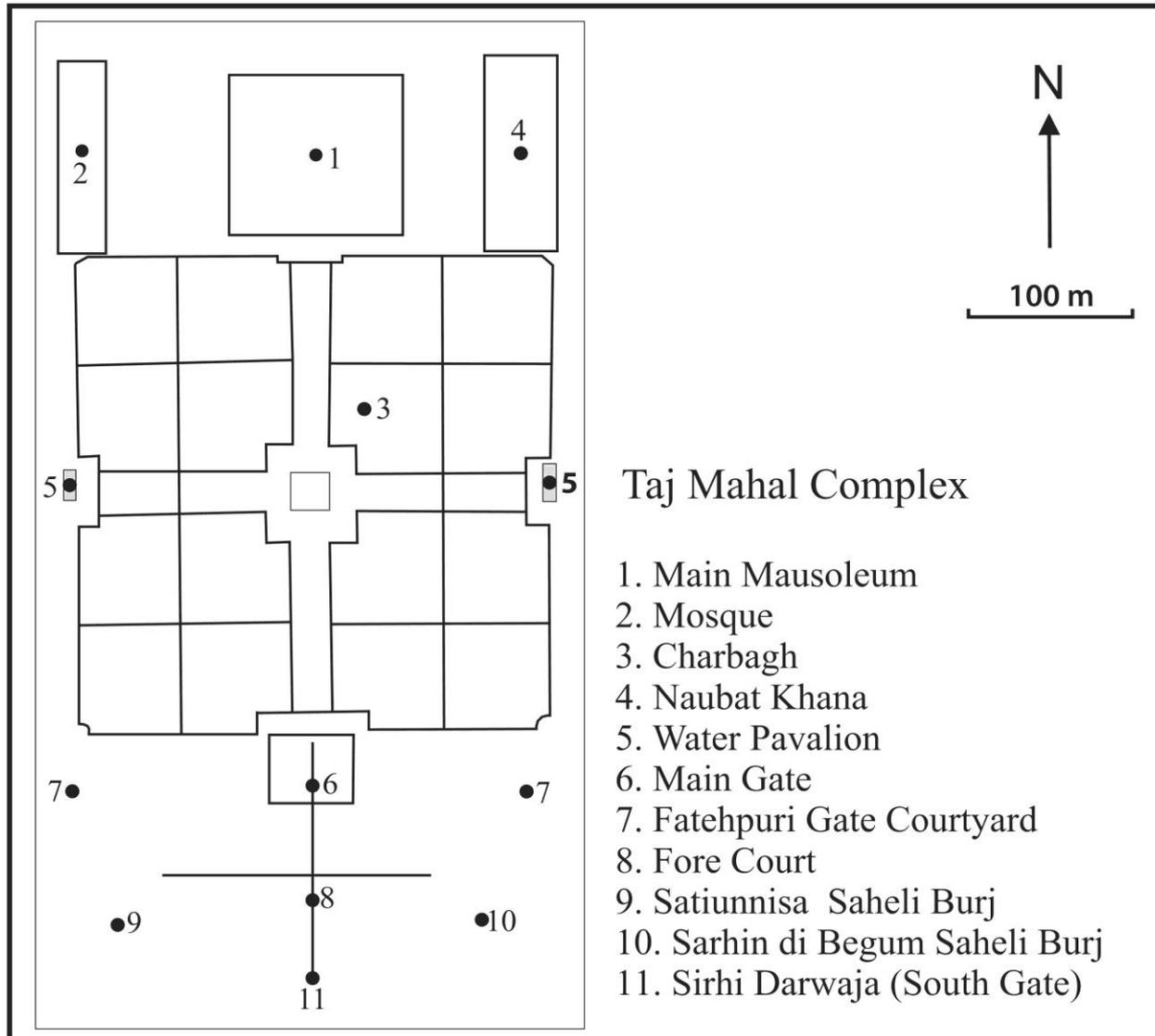


# Taj Mahal

- Taj Mahal, the iconic mausoleum, known for finest quality white Makrana Marble from Rajasthan
- Is inlaid with numerous natural stones which add to the beauty of this architectural wonder from India
- Makrana marble has been recently designated as a Global Heritage Stone Resource (GHSR) by IUGS (Gurmeet Kaur et al., 2020; Garg et al., 2019)
- Makrana marble is the first GHSR from India and in fact the first from the whole of Asia to join the list of 22 designated GHSR's from around the globe

# Taj Mahal Complex (UNESCO Site)

A complete plan shows the Main Mausoleum (**point 1**) in the center of the northern periphery



# About the Taj Mahal complex

- The Taj mausoleum is part of the Taj Mahal complex which has numerous edifices built in marble and red sandstone.
- The white Makrana Marble mausoleum is placed in the center of the northern periphery of the Complex.

# The Main Mausoleum (all made in Makrana Marble)



Photo: Gurmeet  
Kaur

- The main mausoleum is a magnificent octagonal edifice.
- It has arched doorways, walls, floor adorned with intricate inlaid work in semi-precious natural stones and rocks that add an aesthetic dimension to this otherwise white marble edifice.

# Closer side view of the mausoleum



Photo: Gurmeet Kaur

# Inlaid work with varied natural stones



Photo: Gurmeet Kaur

# Arched Gateways

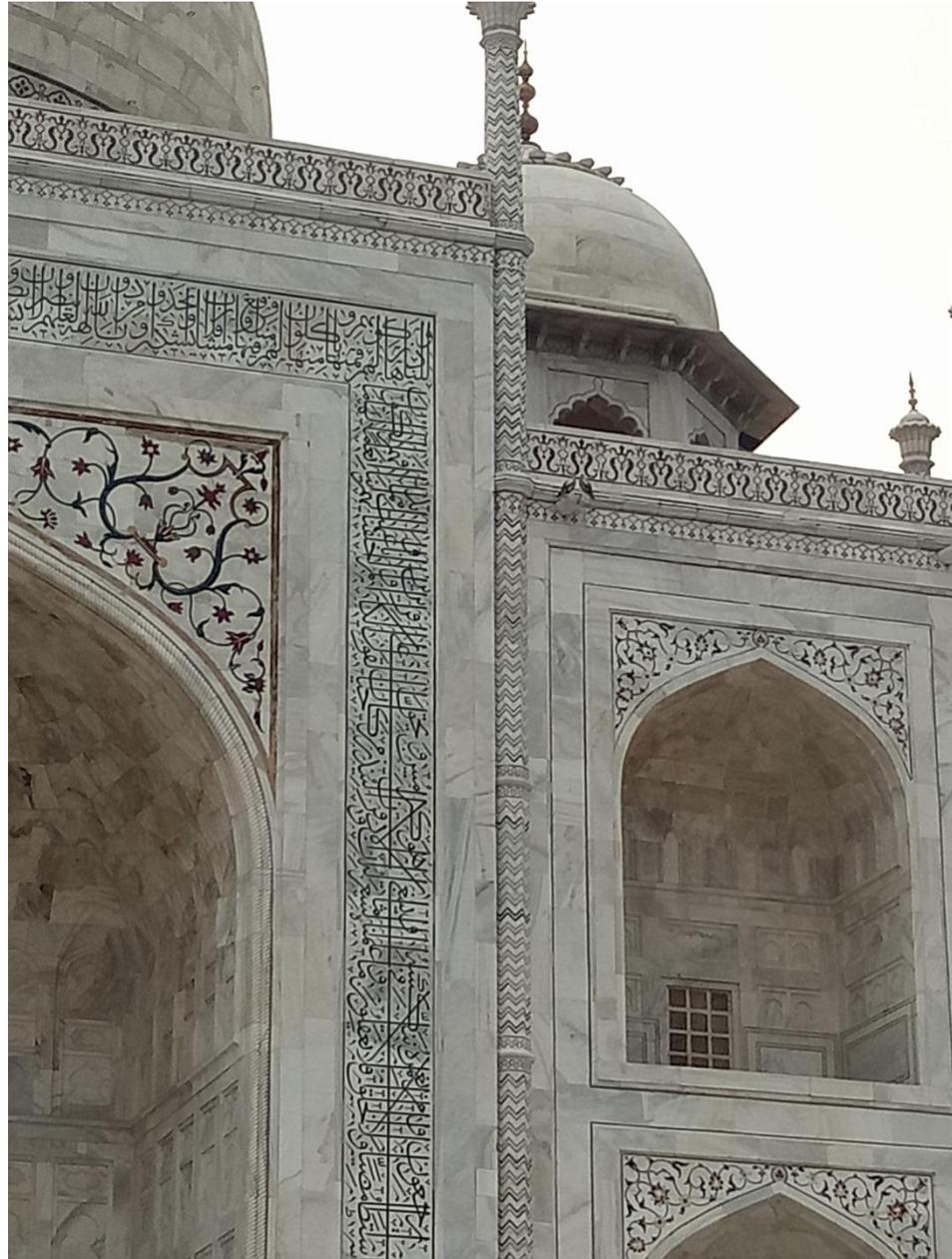


Photo: Gurmeet Kaur

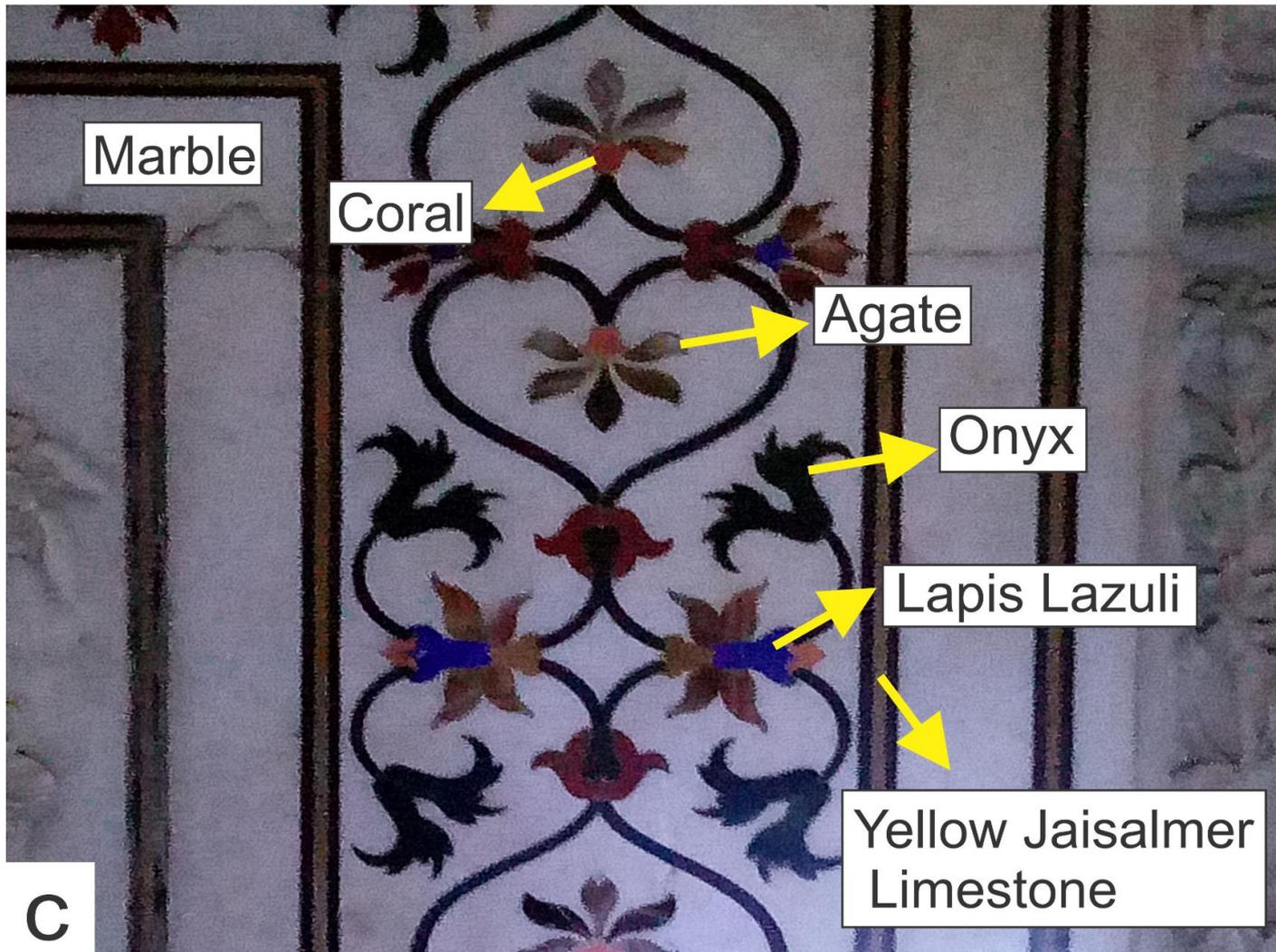
# Closeup view of the inlaid floral motifs



Photo: Gurmeet Kaur

# Closer view of the panels and dodos engraved with inlay work





**Source:** Gurmeet Kaur et al., 2020: Natural stones and World Heritage: delhi-Agra, india. CRC press; ISBN:978-0-367-25180-2

# conclusions

- The natural stones adorning the various components of the marble edifice include Yellow Jaisalmer Limestone, black slate, carnelian, agate, Khatu Rainbow Sandstone, onyx, lapis lazuli, malachite, jade, mother pearl, coral etc.
- The inlaid natural stones of Taj Mausoleum were procured from far off places such as Ceylon, Afghansistan, China, Turkey, Tibet, Russia during the Mughal rule in India (Gurmeet kaur et al. 2020; Dirlam et al., 2019)



*Thank*

*You*

# References

Dirlam D.D. , Rogers C.L. And Weldon R. 2019: GEMSTONES IN THE ERA OF THE TAJ MAHAL AND THE MUGHALS. GEMS & GEMOLOGY, Vol. 55, No. 3, pp. 294–319,  
<http://dx.doi.org/10.5741/GEMS.55.3.294>

Gurmeet Kaur , Singh S. Ahuja A. and Singh N. et al., 2020: Natural stones and World Heritage: delhi-Agra, india. CRC press; ISBN:978-0-367-25180-2.  
[https://www.routledge.com/Natural-Stone-and-World-Heritage-Delhi-Agra-India/Kaur-Singh-Ahuja-Singh/p/book/9780367251802?utm\\_source=crcpress.com&utm\\_medium=referral](https://www.routledge.com/Natural-Stone-and-World-Heritage-Delhi-Agra-India/Kaur-Singh-Ahuja-Singh/p/book/9780367251802?utm_source=crcpress.com&utm_medium=referral)

Garg S., Kaur P., Pandit M, Fareedudin, Gurmeet Kaur, Thakur S.N. and Kamboj A. 2019: Makrana Marble: a Popular Heritage Stone Resource from NW India. *Geoheritage* 11(3): 909–925.