

Dian Culture
Copper Alloy Bracelet
with Malachite inlays
475-221 BC

Condition Report



No. -00143-

Page 1 of 6

Item:

This is a simply stunning bracelet comprised of copper alloy (which appears to be high-tin bronze) with very intricate inlays. The inlays are small, perforated discs of malachite. The discs average around 1-2 mm in diameter and each one has a small perforation at or near the center. The discs are held in place by an

organic glue that is still visible under magnification. Areas of exposed bronze show corrosion that is consistent with the specified age.

The Dian culture flourished in what is now the Yunnan Province in Southwestern China from no later than the early Warring States period (475-221 BC) to the early part of the Eastern Han period (25-220 AD). During that time, their unique culture produced some of the most amazing bronze artifacts in Asian history. Unique to the Dian is the use of these very small circular inlays in the jewelry and adornments of their Royal class.

This piece may have been a component of a larger bracelet such as the one pictured on page 4, which has been dated to the Warring States period (475-221 BC) and accounts for the dating of the bracelet that is the subject of this report.

This bracelet has an inner diameter of roughly 6.2 cm and an outer diameter of roughly 6.6 cm. The thickness of the bracelet ranges from 2-4 mm. The width of the bracelet averages around 1 cm. The total weight is 24 grams.

Priceless Past

Dealer/Collector Services

562 Lakeland Plaza #353
Cumming, GA 30040
USA

www.pricelesspast.com



Condition Report

Micrographs

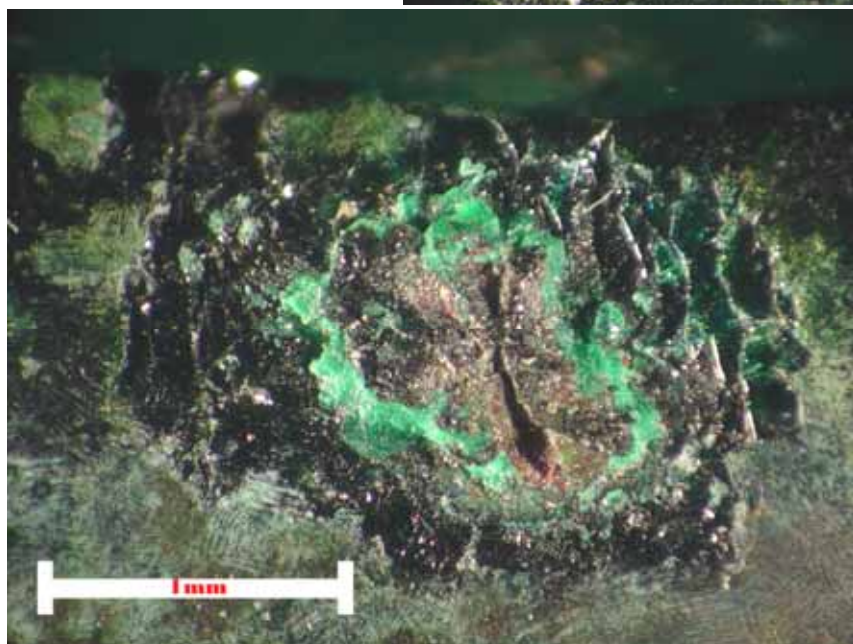
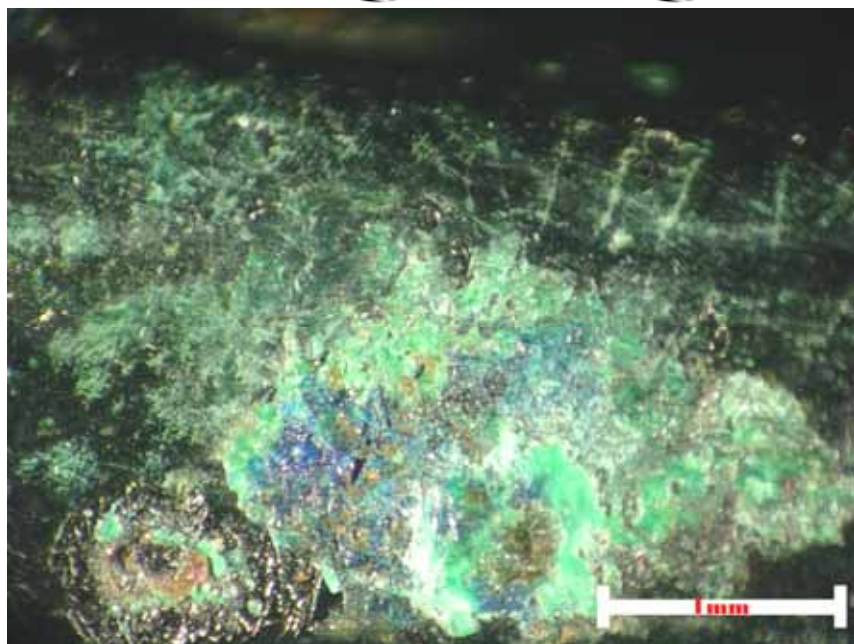


No. -00143-

Page 2 of 6

Priceless Past

Right: This is a micrograph showing the patina on an area along the edge of the bracelet. The blue areas are likely azurite $\text{Cu}_3(\text{CO}_3)_2(\text{OH})_2$ while the green areas are likely malachite crystal growths $\text{Cu}_2(\text{CO}_3)(\text{OH})_2$. In natural ancient patinas these minerals often appear together as they are both carbonates of copper.



Left: This is a micrograph showing the patina on another area along the edge of the bracelet. Malachite crystals are plainly visible as the lighter green areas. The red or reddish-brown areas are likely Cuprite (Cu_2O). The top layers of the metal are also crystallized a deep green. Along the edges are visible dendritic structures in the base metal.

Condition Report

Micrographs



No. -00143-

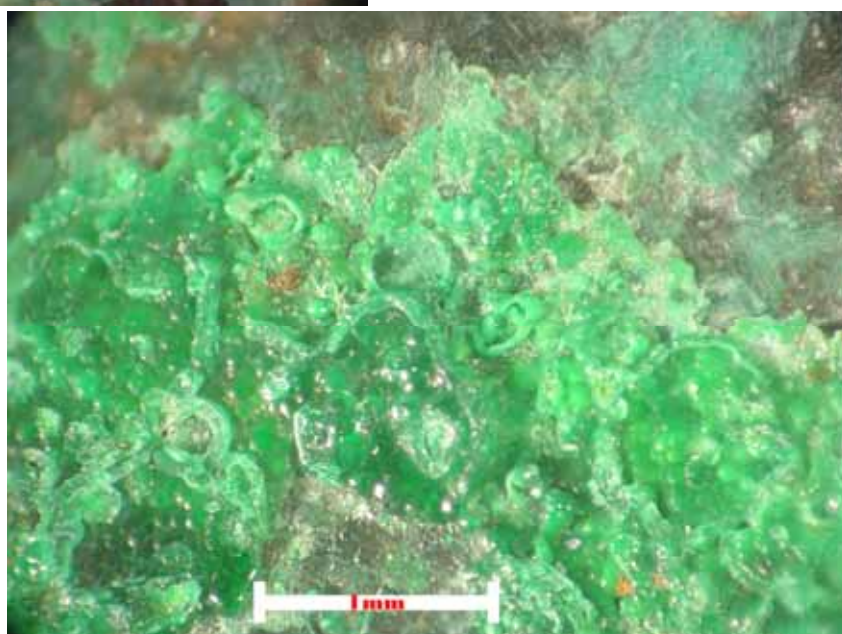
Page 3 of 6

Priceless Past



Left: Micrograph of a random section of the malachite inlays. The light and dark banding of the malachite crystals is clearly visible. Also visible is the organic gluing compound between the malachite discs which is likely a plant resin, though no analysis has been done on the material to verify its composition. The scale bar lower left represents roughly 1 mm.

Right: This micrograph shows an area on the internal surface of the bracelet where malachite crystals have formed naturally as part of the patina. The same light and dark bands can be seen in these crystals. The scale bar at the bottom represents roughly 1 mm.



Condition Report

Additional Photographs and Reference



No. -00143-

Page 4 of 6

Priceless Past



Above: Two composite photographs showing the entire surface of the bracelet. Visible in each photograph are two vertical lines of bronze. The area between those two lines on the top photograph represents one half of the bracelet. The area between those two lines on the bottom photograph represents the other half of the bracelet. Terminal ends of each photograph are redundant areas. (Photographs represent actual size.)



Left: Pair of bracelets in the Yunnan Provincial Museum unearthed at Lijiashan, Jiangchuan County, Yunnan Province. Photograph taken from “Yunnan Wenming Zhiguang: Dianwangguo Jingpinji”, Yunnan Sheng Wenhua Ting & Zhongguo Guojia Bowuguan, Beijing, 2003, p.148

Condition Report



No. -00143-

Page 6 of 6

Additional References

Priceless Past



Left: This is a Dian bronze buckle with the same type of small disc inlays. It excavated at the same site as the bracelets on page four. Photograph taken from “Yunnan Wenming Zhiguang: Dianwangguo Jingpinji”, Yunnan Sheng Wenhua Ting & Zhongguo Guojia Bowuguan, Beijing, 2003, page 162.

Right: Another example of Dian bronze work with tiny disc inlays. Both this buckle and the one pictured above date to the Western Han period (206 BC—9 AD). Photograph taken from “Yunnan Wenming Zhiguang: Dianwangguo Jingpinji”, Yunnan Sheng Wenhua Ting & Zhongguo Guojia Bowuguan, Beijing, 2003, page 163.



Condition Report

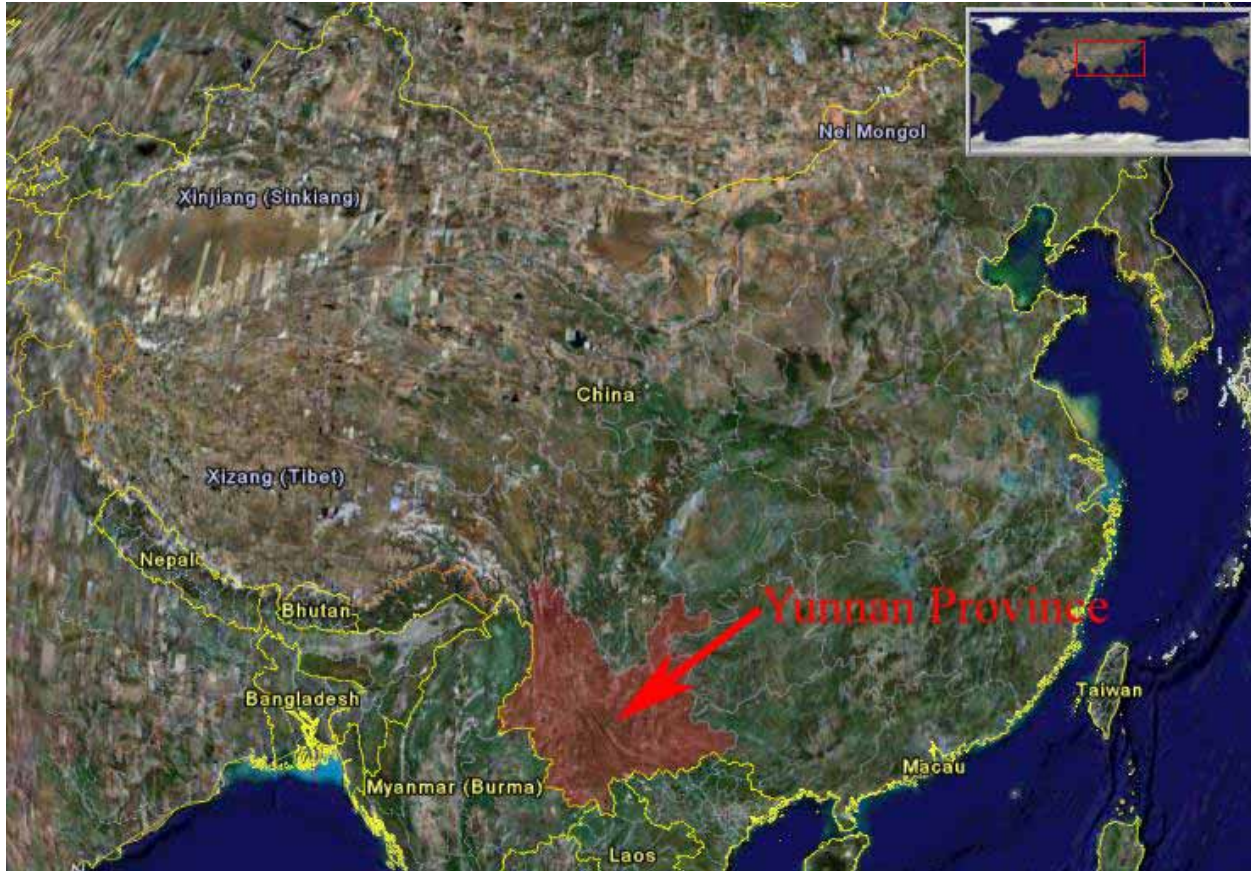


No. -00143-

Page 6 of 6

Map

Priceless Past



Authorized signature Richard A. Nable owner/operator of Priceless Past Authentications

Date

All the information contained in this document is true and accurate to the best of my knowledge.

Neither the person filing this report as indicated by the above, authorized signature nor Priceless Past as an entity shall assume any liability for a decision or decisions based in whole or in part upon the information contained within this report. Should any of the information contained in this report later be deemed inaccurate, Priceless Past will correct the report, create an addendum or refund the price of the report to the original purchaser at the sole discretion of Priceless Past. No other liability is expressed or implied.