

Re: North America's Bronze Age?

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- *From:* Jack Linthicum <jacklinthicum@xxxxxxxxxxxxx>
 - *Date:* 28 Apr 2007 09:14:26 -0700
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On Apr 26, 3:34 am, "Jean" <jean.len...@xxxxxxxxxxx> wrote:

Jack Linthicum a écrit dans le message
<1177685794.994156.219...@xx>...
On Apr 25, 10:02 pm, "Jean" <jean.len...@xxxxxxxxxxx> wrote:

johansson <1732johans...@xxxxxxxxxxx> a écrit dans le message
<_7iYh.39476\$E02.15...@xxxxxxxxxxxxxxxxxxxxxxxx>...

First I would like to point to this interesting article:
Levine Mary Ann, Determining the Provenance of native
copper artifacts

from

Northeastern North America: evidence from instrumental
neutron activation
analysis
Journal of Archaeological Science, Volume 34, Issue 4, April
2007, page
572-587

and ask if it's not about time to recognise that also the so
called New
World had a Bronze Age which in some cases seems to have
started if not
earlier so at least as early as in the so called Old World?
Reason for my
question is that Levine found chemical characterization of
copper from 13
geological deposit dating from Late Archaic ~5000 BP to
Early

Woodland's -

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2000 BP. If the copper is 'gained' from more than a few geological

deposits,

this seem to indicate either that people with knowledge of what to look

for

and how to 'process'/use the Copper at least might have made same

'finding'

as done in parts of the Old World where Bronze first were found/made from Copper melting in charcoal fires. Provided of course that at least some tin oxide existed in Copper raw material as it did here in the Old World.

Inger E

This may be of interest!
PRECOLUMBIAN BRONZE TUMI FROM PERU

<http://www.artigua.com/stores/xanthos/items/288387/en1artigua.html>
Here are some other sites! How valid the information on these sites is I do not know

<http://www.bdomineau.com/gpage11.html><http://ancientamerican.com/>

??? <http://www.davistownmuseum.org/bibPreColumb.htm>

JL

Is this "natural bronze", ie copper with some trace element like

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arsenic or tin in it from the ore?

<http://www.blackwell-synergy.com/doi/abs/10.1111/j.1475-4754.2006.002...>
urnalCode=arch

http://en.wikipedia.org/wiki/Metallurgy_in_pre-Columbian_Mesoamerica

I have never heard of the occurrence of a native copper-tin alloy even at Rio Tinto Spain where the ores of both copper and tin can be found. If a copper and tin ore are smelted together the results could be bronze.

This is possibly how bronze came about in the first place. Tin is not found in a native state (as a metal).

It (tin oxide) is smelted by simply heating in a wood fire. Cassiterite (tin oxide) is the main ore of tin.

It can be found in abundance in Bolivia. Copper ores are common in the new world.

It seems that at one time metallurgy was advanced to the point of smelting and extraction

of metal from ores in south and central America. These skill seem to have either been lost or in

decline by the time of the Spanish

conquest.http://gsa.confex.com/gsa/2003AM/finalprogram/abstract_61530.htm<http://www.lehigh.edu/~inarc>

JL

In early use, the natural impurity arsenic sometimes created a superior natural alloy; this is termed arsenical bronze (of which Ötzi the Iceman's axe is an example).

While copper and tin can naturally co-occur, the two ores are rarely found together (although one ancient site in Thailand and one in Iran provide counterexamples).

From Wiki "Bronze"

<http://en.wikipedia.org/wiki/Bronze>