

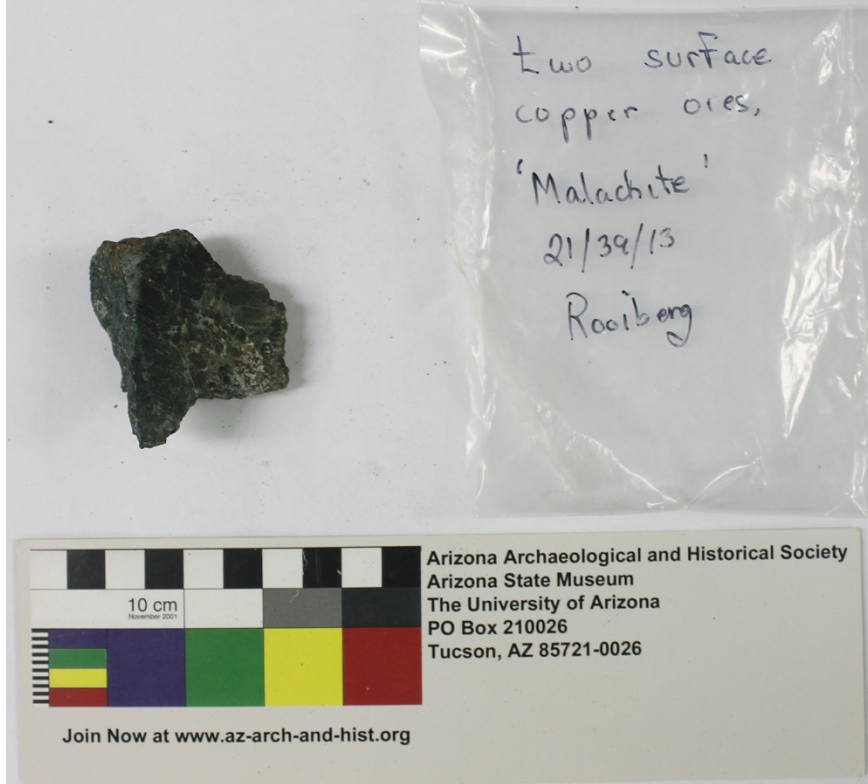
Catalog of selected samples from the University of Witwatersrand archaeology collection:


Object	21/39/5
Object Code	SA-ROI-1
Site	Rooiberg
Context	Found on Smelters Kopje (No. 2)
Description	Fragment of a bar ingot. Previously sampled, chemical data detailed on back of tag. Chemistry of ingot published by Friede 1975 as "block ingot" 21/39/5 (1.05% Si, 0.05% Sn, 0.03% Pb, 0.01% Fe, Tr Ni, As).
Picture	<p>The photograph shows a dark, rectangular metal fragment, likely a copper ingot, tied with a string to a piece of aged, yellowed paper tag. The tag has handwritten text in black ink. Below the tag is a color calibration chart with a 10 cm scale bar and a ruler. To the right of the chart is the contact information for the Arizona Archaeological and Historical Society.</p> <p>Arizona Archaeological and Historical Society Arizona State Museum The University of Arizona PO Box 210026 Tucson, AZ 85721-0026</p> <p>Join Now at www.az-arch-and-hist.org</p>


Object	21/39/2
Object Code	SA-ROI-2
Site	Rooiberg
Context	Ancient tin mine
Description	Bun ingot. Many samples have already been taken of this object. There are associated shavings in the bag that we could collect. Mounted sample is also in the bag. Previously analyzed – arsenical bronze. Discussion by Miller (2010) says that is 24.7% As by bulk composition, but that the actual chemistry varies widely by sample spot.
Picture	

Object	21/39/2
Object Code	SA-ROI-3
Site	Rooiberg
Context	Ancient tin mine
Description	Cutoff from copper ingot 21/39/2.
Picture	

Object	21/39/13A
Object Code	SA-ROI-4
Site	Rooiberg
Context	Ancient tin mine
Description	Cut sample of Azurite
Picture	<p>Two surface copper ores, 'Malachite' 21/39/13 Rooiberg</p> <p>10 cm November 2001</p> <p>Arizona Archaeological and Historical Society Arizona State Museum The University of Arizona PO Box 210026 Tucson, AZ 85721-0026</p> <p>Join Now at www.az-arch-and-hist.org</p>

Object	21/39/13B
Object Code	SA-ROI-5
Site	Rooiberg
Context	Ancient tin mine
Description	Cut sample of malachite
Picture	 <p>The photograph shows a dark green, irregularly shaped malachite sample on a white surface. To the right of the sample is a clear plastic bag with handwritten text in black ink: "Two surface copper ores, 'Malachite' 21/39/13 Rooiberg". Below the sample and bag is a scale bar with a 10 cm ruler and a color calibration chart. The scale bar includes the text "10 cm November 2001". The color calibration chart consists of a row of colored squares: black, white, grey, black, purple, green, yellow, and red. Below the scale bar and color chart is the text "Join Now at www.az-arch-and-hist.org". To the right of the scale bar and color chart is the text: "Arizona Archaeological and Historical Society", "Arizona State Museum", "The University of Arizona", "PO Box 210026", "Tucson, AZ 85721-0026".</p>

Object	43/68
Object Code	SA-ROI-6
Site	Rooiberg
Context	Central group
Description	Malachite ore samples.
Picture	

Object	43/68
Object Code	SA-ROI-7
Site	Rooiberg
Context	No. 3 furnace
Description	Malachite ore samples.
Picture	 <p>The photograph shows four irregular, brownish-green malachite ore samples arranged on a white background. A 10 cm scale bar is visible at the bottom left, with the text "10 cm" and "November 2001" printed on it. To the right of the scale bar is a color calibration chart with various colored squares. In the bottom right corner, there is a block of text: "Arizona Archaeological and Hist", "Arizona State Museum", "The University of Arizona", "PO Box 210026", "Tucson, AZ 85721-0026". At the very bottom, it says "Join Now at www.az-arch-and-hist.org". A small white label with the handwritten number "43/68" is placed to the right of the ore samples.</p>


Object	21/39/6
Object Code	SA-ROI-8
Site	Rooiberg
Context	Blaauwbank
Description	Bronze ingot fragment. Has marks from two previous samples. Chemical composition is on the back of the tag and was published in Friede 1975 as "slug ingot" (Cu ~80%, 5% Fe, 7% Sn, 3% Ni, 2% As, 3% Si – per back of tag. Composition variable based on 1975 results). Also published in Miller (2010).




Object	Copper Musuku ingot
Object Code	SA-OLI-1
Site	Olifantspoort
Context	W. of road
Description	Musuku ingot recovered from Olifantspoort. It is composed of layered Cu metal and slag. 2785 grams.



Object	19/70, No. 87
Object Code	SA-K2-1
Site	K2 (Bambandyanalo)
Context	Treasure pot
Description	Bangle piece, ~9cm long, has some kind of coating or lacquer on it. From Gardner's excavations.
Picture	<p>19/70 No. 87</p> <p>V.R. Lowe 19/70 Artefacts etc from Mapungubwe - Bambandyanalo Gardner excavations 1936?-1940</p> <p>10 cm November 2001</p> <p>Arizona Archaeological and Historical Society Arizona State Museum The University of Arizona PO Box 210026 Tucson, AZ 85721-0026</p> <p>Join Now at www.az-arch-and-hist.org</p>

Object	19/70, No. 54
Object Code	SA-K2-2
Site	K2 (Bambandyalo)
Context	Treasure Pot
Description	16 wound copper bangles roughly 11 cm in diameter. 15 are complete and 1 is fragmentary. We would target the single fragmentary sample.
Picture	 <p>Arizona Archaeological and Historical Society Arizona State Museum The University of Arizona PO Box 210026 Tucson, AZ 85721-0026</p> <p>10 cm November 2001</p> <p>Join Now at www.az-arch-and-hist.org</p>

Object	19/70, No. 55
Object Code	SA-K2-3
Site	K2 (Bambandyalo)
Context	Treasure Pot
Description	26 fragments of wound bangles. Some tightly wound, some appear to have been unwound. One has a nick on it showing yellowish metal. We would target a fragmentary piece.
Picture	<p>N:55 B.d. Nalo Treasure lot 20 fragments.</p> <p>10 cm November 2001</p> <p>Arizona Archaeological and Historical Society Arizona State Museum The University of Arizona PO Box 210026 Tucson, AZ 85721-0026</p> <p>Join Now at www.az-arch-and-hist.org</p>

Object	19/70, No. 158
Object Code	SA-K2-4
Site	K2 (Bambandyanalo)
Context	Treasure pot
Description	Bangle, possibly bronze
Picture	 <p>Arizona Archaeological and Historical Society Arizona State Museum The University of Arizona PO Box 210026 Tucson, AZ 85721-0026</p> <p>Join Now at www.az-arch-and-hist.org</p>


Object	19/70, No. 52
Object Code	SA-K2-5
Site	K2 (Bambandyanaló)
Context	Treasure pot
Description	Bangle, possibly bronze

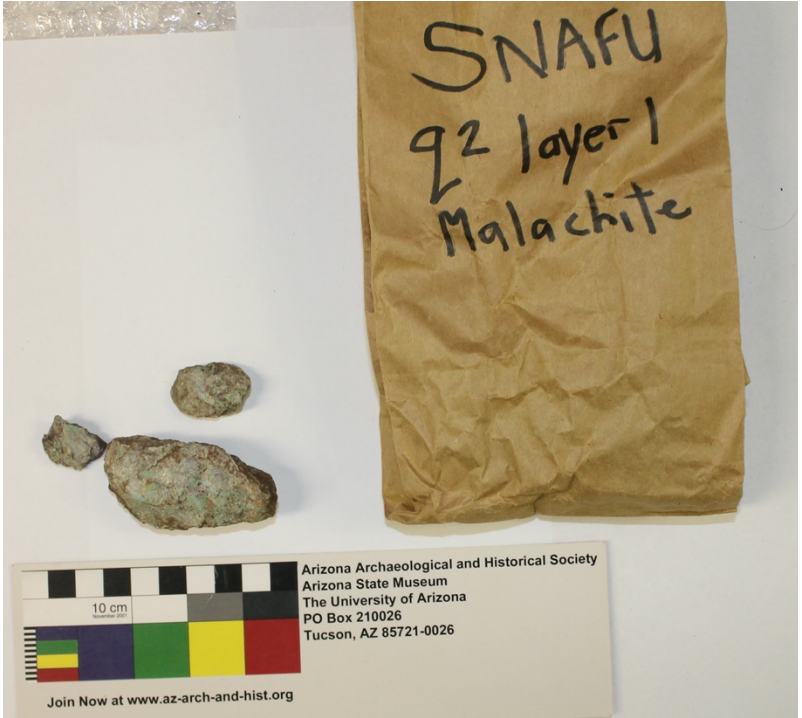
Picture



Object	55/45
Object Code	SA-LER-3
Site	Phalaborwa
Context	
Description	Lerale ingot, one sample cut from end. Possibly the Phalaborwa lerale reported by Friede 1975 (no number given in the publication, but it is reported as 0.45% Fe, 0.04% Ni). Also published in Miller (2010).
Picture	

Object	3/41
Object Code	SA-LER-4
Site	Northampton, Acornhoek (Pilgrim's rest area)
Context	
Description	Lerale ingot, ~50cm long. Possibly published by Friede 1975, but unclear which is #2. Chemical composition published in Friede 1975 (2.35% Fe, 0.32% Ni, Tr Pb, As, Sn).
Picture	<p>Two Lerale sticks from Northampton, Acornhoek, Northern Tswana</p> <p>Arizona Archaeological and Historical Society Arizona State Museum The University of Arizona PO Box 210026 Tucson, AZ 85721-0026 Join Now at www.az-arch-and-hist.org</p>

Object	3/41
Object Code	SA-LER-5
Site	Northhampton, Acornhoek (Pilgrim's rest area)
Context	
Description	Lerale ingot, ~55cm. Possibly published by Friede 1975, but unclear which is #2. Chemical composition published in Friede 1975 (2.35% Fe, 0.32% Ni, Tr Pb, As, Sn).
Picture	

Object	Harmony Mine malachite sample
Object Code	SA-HAR-1
Site	Harmony Mine
Context	Q2, layer 1
Description	Contains many samples of malachite from Harmony mine. Most have little to no copper, but this is an important mine to try to include in our background geological database.
Picture	 A photograph showing four pieces of malachite mineral samples of varying sizes and shapes, some with a greenish-blue patina. To the right is a brown paper bag with handwritten text in black marker: "SNAFU", "Q2 layer 1", and "Malachite". Below the samples is a metric ruler showing a 10 cm scale and a color calibration chart with various colored squares. In the bottom right corner of the photo area, there is a small white card with the following text: "Arizona Archaeological and Historical Society", "Arizona State Museum", "The University of Arizona", "PO Box 210026", "Tucson, AZ 85721-0026", and "Join Now at www.az-arch-and-hist.org".

Object	40/51
Object Code	SA-MON-1
Site	Monarch mine, Penhalonga
Context	Q2, layer 1
Description	9 copper beads, 1 large brass bead. We would target one of the copper beads.



Object	60/74
Object Code	SA-ELG-1
Site	Elgin Mine, Penhalonga
Context	Several feet below surface in gold bearing stratum
Description	7 copper beads. We would hope to sample one of these.
Picture	