

UPDATING THE WITTRY TYPOLOGY (Phase IX dated 4/30/19)

More work done on the VI category, including a new photo.

Updates to Wittry's 1957 typology (Wisconsin Archeologist, Vol. 32 #1) with some research and with Minnesota Archeologist's Copper Issue in 1940. Note that Wittry may have used this MN on which to base his, but not all of MN's were used. According to Jack Steinbring (Ten Thousand Years, 53), Wittry's classifications were based on 2,600 specimens from the "so-called Wisconsin heartland." The CAMD is now at over 68,000 from all the Americas (over 22,000 from Wisconsin).

NEW COLOR CODE – BLUE = WITTRY; Green = JACK STEINBRING/Gordon Morris; BLACK = ALL FROM CAMD RESEARCH; Black ITALIC = MY NOTES

TOTAL DATABASE COUNT TO DATE: 69919

STEINBRING: "The database on copper technology is valuable to archaeological science because it includes taxonomies developed by "hands on" research. The most embracing and virtually timeless is the Wittry Typology initially created in 1950 in his "Bachelor's Thesis" at the University of Wisconsin-Madison – a source most prehistoric copper researchers failed to examine. Typologies are changeable because new data and understandings of those data are constantly changing. This applies to Wittry's typology as well. While it has seen changes through the years by several practitioners, it remains surprising intact. I think this is because the basic attributes reflect an uncommon uniformity for the general body of Archaic copper."

By Monette Bebow-Reinhard, www.monettebebowreinhard.com

Type I – Points

A1 = Elongated triangular blade, 3 sided socketed stem ridge down the back, front is flat. (One dated in Oneida County 6,000 BCE, but not known who did this dating, or how. One in MI is 3200 BCE) Also likely the one referred to as lanceolate (generally accepted as Archaic. *Probably also referred to as lanceolate ovate.*) Note the deciding feature is the tip of the tang as pointed, not the squared shoulders of the blade. Believes 4,000-2500 BCE is accurate for these. The most numerous in Wisconsin (1970).

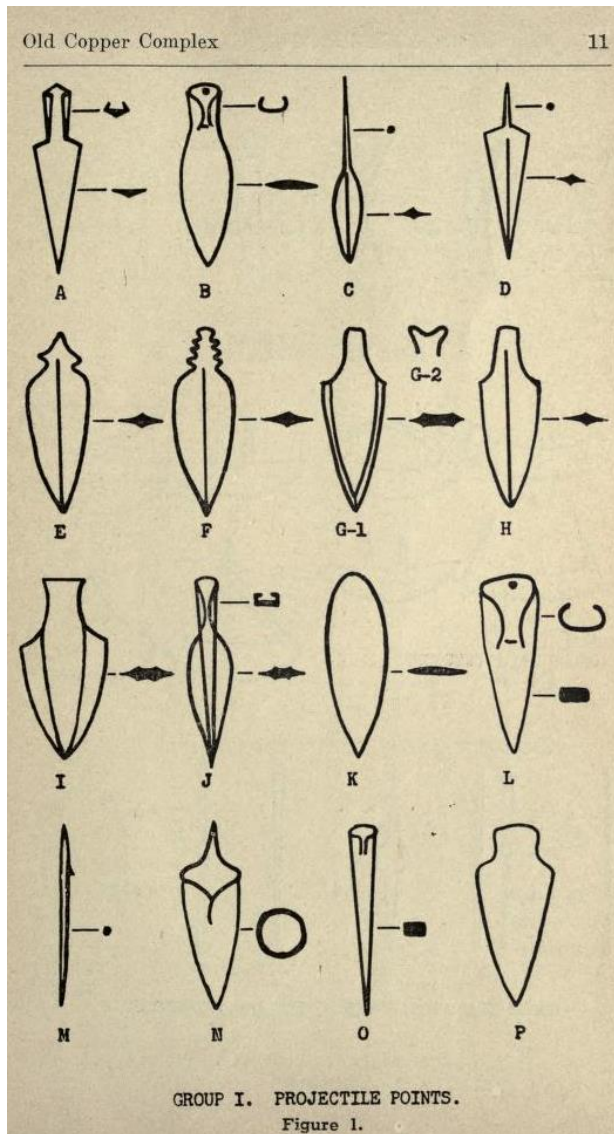
A2 = Includes presence of a step in the surface of front face, causing the floor of the socket to be lower than the blade, providing an abutment for the shaft (Info from Wittry Vol. 38 #4; *he also notes that while A1 was found mostly in Washington & Manitowoc counties, the A2 was in Wolf and upper Fox River valleys and more limited.*

B1 = Unridged socketed leaf blades, edges at socketed stem are rounded and often the socketed stem has a riveting hole. Confirmed that this is the leaf-shaped blade. Deciding feature is the rounded end of the tang, not the shoulders (info per Steinbring and Gordon Morris, 6/24/17).

B2 = Median step, no ridge, no riveting hole (this is Wittry's subtype per a Canadian source)

B3 = Well-formed ridge and median step, often riveting hole.

B4 = socket is barbed; Steinbring says this is Wittry's I-B3 but I see nothing in Wittry's chart that shows a third variation, or a barb in the B form. These have been found and will be noted as this type.



C = rat-tail point, short rounded blade with long thin and rounded stem, sometimes ridged. (Id'd as Late Archaic in IL) Can be ridged on both sides of the blade. Referred to as ellipsoidal (elliptical); could be nearly diamond shaped, to broad ovate. Loss of ridge indicated by shorter tang. Probably also referred to as lanceolate spatulate. Noted as the first to change hafting from enclosure to insertion (Ten Thousand Years, 69)

C1 = Without ridge and shorter tang is a feature of Canadian.

D = (Shorter rounded thin stemmed point with elongated triangular blade, often ridged on both sides. Can be un-ridged. Also referred to as lanceolate rat-tail. (Good example in IL) Blade is elongated triangulate with short rat-tail tang, pointed and circular.

E = ridged, single-notch "hat" tang, can be ridged on both sides, blade is leaf-shaped. Stem can vary in shape but is always with a single side notch on each side. Considered Middle Archaic 6000-1500 BCE (Stoltman 1977)

F = Ridged, sawtooth point, leaf-shaped, generally narrower than I-E (Id'd in IL as Hopewell and as ROC in Oneida County, Middle Woodland in IL) At Morrison's Island site, given a date of 4700 BCE,

(far earlier than ROC Late Archaic).

F1 = Wide and flat and no ridge, but with sawtooth stem. See MN data in Rouseau County.

G1 = elongated triangulate, beveled flat stem triangular point; these are sometimes decorated with hash marks.

G2 = beveled fishtail flat stem triangular point; refers to difference as "notch in the base" as Wittry's description. At Riverside dated 1,060 BCE and at Oconto of 5660 BCE, Steinbring argues against the dating controversy at Oconto (112). See photo above.

G3 = a third type of stem, a knob, making it look like a turkey tail. If it's not beveled, it wouldn't belong here.

H = ridged flat stem triangular point, can be ridged on both sides or just one side. Unlike D, this has a thick flat stem, blade is more leaf shaped. Extremely rare; stemmed and ridged, elongated triangular, tang has squared base. Possibly ROC, see Ontario.

H1 = same without a ridge. (see MPM WI4, no location)

I = Beveled ace of spades triangular shape, flat stem (Red ocher culture (ROC) point); stemmed, ridged, elongated triangular "ace of spades" (not ridged, beveled); red ocher associated, perhaps only used from 1500 to 500 BC. Reigh site establishes dating of 1660 BCE per Ritzenthaler, 1960.

J = Deep bevel socketed, leaf shape point (ROC point); includes under I-B; the difference is in the beveling. Can be riveted, see Oshkosh Mueller sample. Also called lanceolate. *Could also be elliptical or ovate, if socketed.*

K = cache blade point, no stem; lanceolate; check to make sure stem wasn't broken off; some have ridge, some have decoration; found at Starved Rock, also known as McCreary point, dated to 7000 BCE (Starved Rock, IL), the base is concave. Also referred to as elongated obvate; *lanceolate is a mistake here. The dating of 7,000 BCE is Archaic, not Paleo, so we'll take some caution with using this to identify a Paleo site (Bill Ross says none have been found in Paleo context).*

L1 = socketed with flat tip (conical with flattened tip); some are riveted. Don Spohn shows one from central Wisconsin with a very long blade. One dated in Oneida County to 6400 BCE. One calls them socketed awls (See January 2019 newsletter). Some of them could be transitioned to that category.

L1a = same but barbed in socket

L2 = Deep socket, socketed handle appears 'sunken' or 'stepped' (see IMG3860); depending on size, could be a chisel but would need a new type assignment. *Could also have a more defined arrow type head. (see International Falls MN)*

L3 = ridged and with a pointed tang; Gordon Morris suspected this as a new type so this best fit seems to be here.

M = Long thin barbed point, double-pointed;

M1 = long and socketed

N1 = barb in socket triangular point; thought to be immediately pre-ceramic; (potentially ROC); could also be barbed conical.

N2 = Socketed point with barb in blade, rivet hole, blade like I-B or I-L. *Probably the oldest toggling harpoon.*

O = conical point (one dated in Oneida County to 6100 BCE).

O1 = conical point with completely open socket. Different from I-L because its tip is not deliberately flattened.

O2 = with rivet holes on each side of wide end (2) (see MI from MPM), and potentially barbed

P1 = is an arrow point, flat blade, flat wide “spalutate” tang, slightly triangular; small in size. Often without a stem.

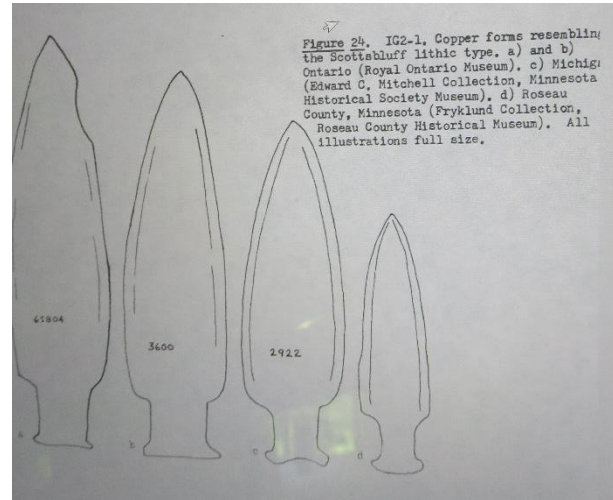
P2 = **what’s called Xmas tree point, spear point, flat blade flat wide tang, triangular.** Id’d in MI as Late Archaic; **Steinbring gives added locations (122).**

Q = Ovate spatulate (new type) see MPM photo in Calumet County.

MN1 = Eye tang point, tang is flat and tapered, blade is long and leaf shaped (see Loudon’s in Barron Co.)

MN2 = Spatulate tang, tang is knobbed or thicker at the end, blade has heavier shoulders than MN1

MN3 = Notched tang, the bottom of the blade, at the tang, has heavy indents or notches with knobs at other end of tang. **This could be similar to what Steinbring shows as an I-G2, not always fish-tail but sometimes knobbed. See photo on right for variants in this category.**



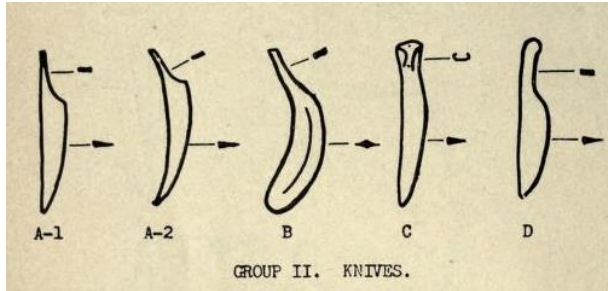
MN4 = Turkey tail, this has the distinctive tang with a diamond shape at the end, most refer to it this way.

MN5 = the Half-conical or “clad” was used as a tip of a digging stick. Sometimes with small hole for riveting. This could potentially be a new ID for some of the I-L points as well, or this is what we would call the open conical. Photo in Neubauer MN photos.

These are from Minnesota Archeologist “Copper Issue” 1941; the last from MN Arch 59, 2000, 129

For points and knives that have hash or tally marks see Susan Martin, Wonderful Power p. 252; connects hash marks to Reigh and Hemphill

Type II – Knives (all have some beveling)



A1 = Straight back, flat tanged; starting in Archaic, has a long use span. Spatulate knife could be any one of these, until further notice, I'll use it here. Also called rat-tail.

A2 = Curved back, flat tanged; less used than A1; also called rat-tail lunate.

B = Ridged, curved back, squared tang; considered rare. Also called lunate spatulate. One found that was associated with ROC (see Ontario).

C = Socketed tang; could be riveted or not. Steinbring agreed that riveted did not warrant a separate distinction.

C1 = Has more of a defined edge, like an A-1 (see MI A6)

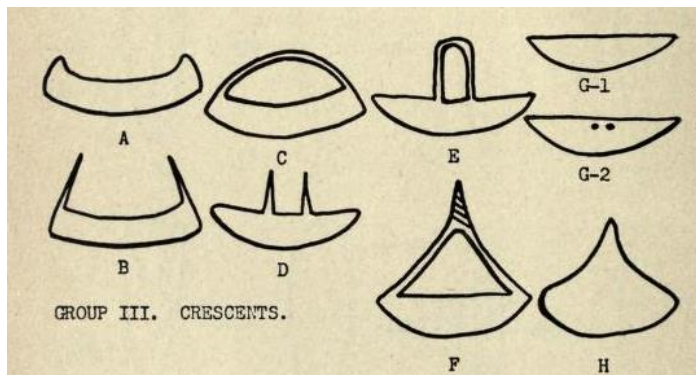
D = Flat back, rounded blade, flared or knobbed tang (these appear more refined); sometimes has hash marks. Considered as old as 2500 BCE. Problem is the misidentification of one at Falcon Lake in Canada.

(all MN knife types fit above)

Type III – Crescents knives or ornaments

A1 = Canoe style, no prongs (various length ends); Steinbring notes prongs vs. no prongs; these are all no prongs.

A2 = Canoe with notch in outer center of blade edge (could be ornamental)



A3 = canoe with notched ends (could be ornamental); Steinbring also saw a lack of beveling, indicating ornamental. Potential gorget.

B1 = Prongs on both ends (various lengths) and in all tang varieties, such as rounded, squared, thin and stubby, and turned inward; Steinbring also believes the tang on only one end is deliberate; he shows

another of curved ends (see Pickerel Lake); Overstreet identified as ROC at Milwaukee County.

B2 = High prongs up from either edge with a straight handle on top connecting the two. See Canada & Reigh Site & Riverside; locations indicate Late Archaic.

B3 = it looks like it's missing the handle on one side, a form similar to a scythe.

C1 = full but short handle on top; considered rare. See WA 3-3 Plate 15, #120, from MN, and Hamilton 1209, also MN, with different curvature.

C2 = High curvy handle (see MN database and photo right).

D = two prongs up from the center, evenly spaced from either end (various lengths)

E = Prongs from D join to form a complete handle. One found in MI with high handles, similar to MN above but prongs in the center.

F1 = Prongs on both ends form a V in the middle, handle twisted

F2 = Prongs up from center meet to form V, not twisted

G = Ornament, some perforated, no prongs (MN shows one); Steinbring also combines these two forms, as they are rare.

H1 = Tumi blade shape with short stem. Completely rounded blade with crescent cutting edge and short stem is formed in the center. (Also thought to be the style of Eskimos, Steinbring, 63) See Example in Jefferson County (MPM).

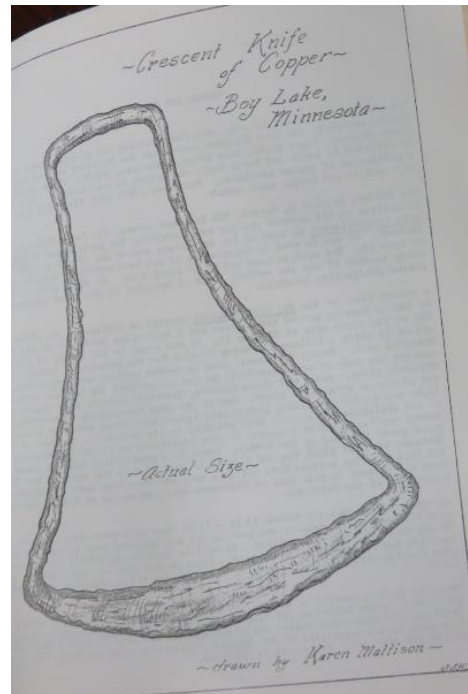
H2 = Same but with a long stem and evolved blade. Seen as axe-money (t-coin) in Mexico after about 1300 CE. Photo below is from Mexico at Spurlock Museum in Illinois. There several varieties of this as it evolved from the celt into a celt crescent.



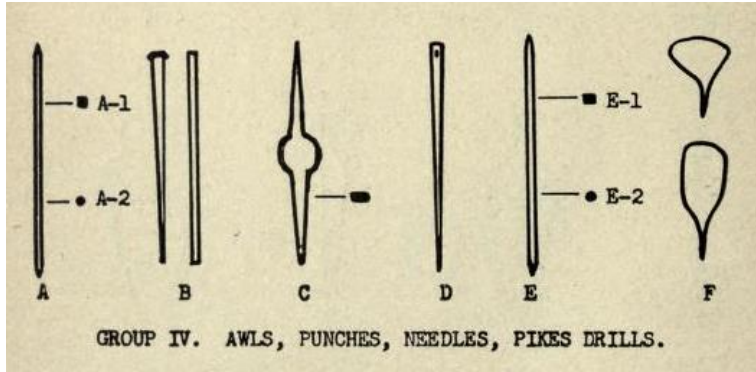
I = High tangs from both ends but ends are rounded, and then the tangs form angles to straighten upright. See example in Steinbring's Figure 8 in MN.

J = This is the infamous "oar tip" shaped decorative crescent, must be ornamental, can't see a use for this otherwise. See IMG3468. It is rounded with a v-bump on the middle inside of the crescent.

J = what could also be called the latchkey style, this one has a tang handle coming up off one end, with the other end of the crescent looped over to touch (see IMG3471 Oneida County)



Type IV – Awls, punches, needles, pikes, drills



A1 = squared awl, double pointed; at Riverside, one found inserted into a wooden handle.

A2 = round awl, double pointed

A3 – double pointed, flattened the whole length.

A3a – Flattened and wider on one or both tips (rare; see Pownell)

A4 = cylindrical rolled copper shaft with pointed tip (see photo below and type in IL).

B1 = pointed awl, either squared or rounded, with other tip flattened; probably predominately round.

B1a = Flat top tip appears to be hammered, sometimes called nail.

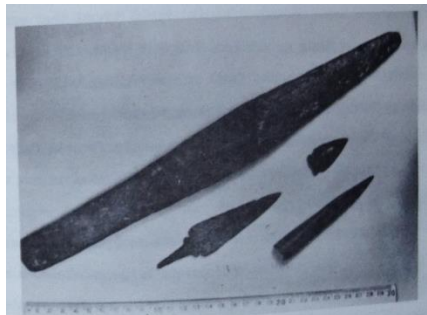
B2 = squared awl, both tips flat (beadmaker); often shows the effects of being hammered on.

C = Awl with two pointed ends and bulge in middle (as in making larger holes)

D1 = Needle (hole or evidence of one on one end), hole appears perforated; this includes broken eye types; oldest type, in Mexico around 600 CE. (photo at right)

D2a = needle with hole that has tucked loop; newer type (1200 CE) (in photo)

D2b = needle with hole with flapped loop



D3 = awl with open insertion end (see MPM in MI)

E1 = Pike, squared; Steinbring notes them at 8" or more.

E2 = Pike – rounded

E3 = Pike, socketed. This was noted in a Canadian collection on the Kam River, but no photo is available.

E4 = Pike, formed like a IV-C. (see photo, found in Manitoba)

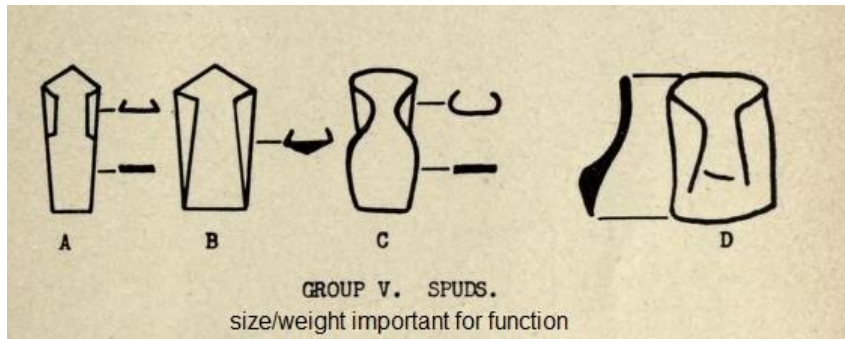
F1 = Piercers (also called punch or drill), these have a flat gripping edge with a point. Smaller gripping point, longer tip like an awl.

F2 = Large gripping area, short tip for piercing.

G = Stripper (newly ID'd by a collector), these appear liked worked flattened pieces but have a notch that he surmises was used for prepping string, leather and rope. (*Will add name and photo with his permission.*)

H – Scrapers, long handle, variable spoon-sized head (spatulate). See Thunder Bay example. These can be knife, spoon or point shaped.

Type V – Spuds



(used for stripping bark off trees, cutting holes in ice to secure water, digging out logs and household troughs and for agriculture – per MN Arch Copper Issue (41))

A1 = Pointed, socketed near the tip only, straight on bottom half, some ridged; believes the V-A and V-B are as old as the I-A1 point. Indicates not strictly agricultural.

A2 = the lower part has a 'step,' or recessed socket floor, which does not cause a protrusion on the back; V-A types are only in Wisconsin.

B1 = Full socketed, pointed; found only in Wisconsin.

B2 = full socketed, rounded (MN Arch Copper Issue)

B3 = full socketed, flat blade (Canada)

B4 = Light socket on lower half, pointed tip, wide at lower end (Canada)

C = socketed on top, bottom is rounded and beveled, some rounding in the socketed area; see examples in Canada and IL.

D = The most refined look with a bulge in the blade area, and is socketed (MN calls short socketed, rest are long socketed); most widely distributed type; dated to 2050 BCE. Can be ridged (see Dodge County "spudge.")

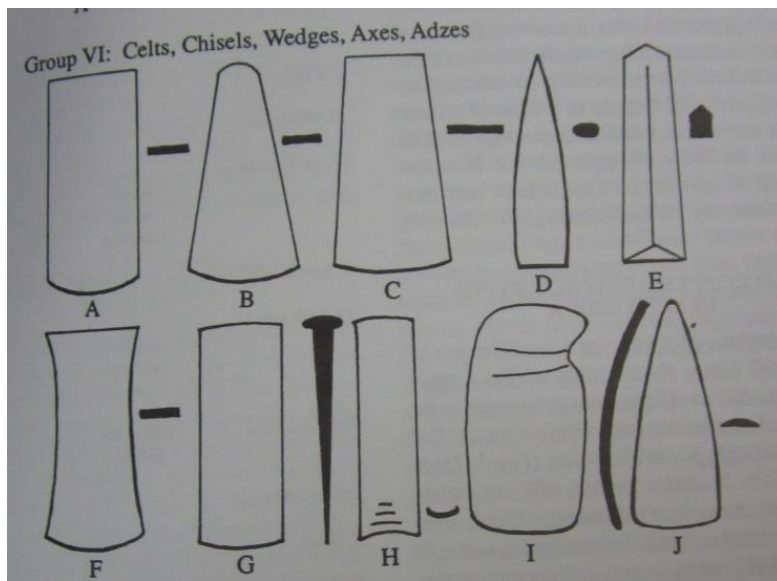
D1 = same style but with a handle as long as the socket (see Dane County)

E = Long and flared, socketed, flare can be small or distinct. (MN Arch has two categories but these varieties all fit into one. I suspect VI-J (below) in Wittry could fit here.

E1 = socketed and concave – see photo from Michigan below



Type VI – Celts, Chisels, Wedges, Gouges, Axes, Adzes



- A. Most likely an Axe, depending on size
- B. Celt shape, Adze or wedge, depending on size
- C. Axe likely or wedge if small.
- D. Chisel or gouge; seen in use for socket bending
- E. Chisel
- F. Adze or axe, depending on size
- G. Rare, similar to A but with hammered head
- H. Chisel with beveled end
- I. Axe or hammerstone, rare
- J. Also rare – any guesses?

A = squared off rectangular, axe, sometimes called celt axe but it's not; or extremely large wedge, unknown in Archaic context.

B1 = most often called celt, diamond shape, narrow on top edge, if thin, celt; edges often flared; tapers to rounded proximal edge. Found in Archaic context at Reigh and Morrison's Island but mostly Hopewell. Also referred to as ovate oblong or trianguloid.

B2 = same but if small is a wedge (evolutionary) – in MN Arch wedges can also be long, but then I think they're chisels. Said wedge use is splitting wood or mining (these uses would typically be smaller). Thick and heavier B2 removed and put into Archaic 'C' category.

B3 = Wider edge has a biting center point. Can be socketed.

C = Axe or wedge; is called flat blade by MN Arch (41), with parallel edges tapering toward base, cutting edge slightly convex. Also called obvate oblong, so VI-B and VI-C may have seemed interchangeable. The distinct difference is with the top edge is flat or pointed. Can be slightly socketed.

C1 = Flared on thick end, straight and thicker on top end, often with hammer marks, this has also been called a celt, but is most often an axe or wedge; Not different enough from VI-B to be considered. Difference could be in size or weight; refer to this as Archaic, and VI-B as Hopewell/evolutionary. These are much more common; more useful. Perhaps the VI-B is more ritual.

C2 = End is not flared, straight edge at bevel.

D = Elongated, obvate, and pointed, this is generally a chisel or gouge; considers it an adze. Also likely referred to as oblate oblong. Usually beveled. In Michigan we find a use as a form to make points. Perhaps also referred to as a "gad" and found with the heavier ended pounded in (see Keweenaw).

D1 = Solid and rounded, pointed on one end.

E1 = Elongated, ridged, and pointed, also a chisel or gouge.

E2 = "linear celt," this is a new chisel or gouge type found in MPM Fond du Lac County. Elongated, ridged, and flared like a celt. Likely Hopewell, one was found in Stevens Point in a mound.

E3 = Oblong and ridged, with tang for hafting. See Dodge County, MPM

F = Curved shape with an indent in the middle (bell-shaped), flared & beveled on bottom, thicker and wider at the top, cutting edge is lunar, this is rare, probably an adze or axe. There's an example of one in Houghton, but not quite like this. Doesn't fit anywhere else though.

F2 = Same but double biting – beveled on both ends. Not common, also typical of stone.

G = Wide but thin and most often appears hammered on the top. Very rare form, probably a scraper or gouge; VI-A could be an unused VI-G; probable wedges. Also called a rectangular celt.

H1 = Elongated but with a deep beveling on one end, pointed, also a chisel, back is rounded.

H2 = same but beveled end is squared

H3 = same as 2 but with a light socket (see one in Keweenaw)

I = Grooved or notched (looks like stone hammerstone), irregular in shape, this is an axe. It's heavy on top and notched. Rare.

J1 = Curved celt-shaped, potentially a socketed chisel to fit in Type V but with socket worn down.

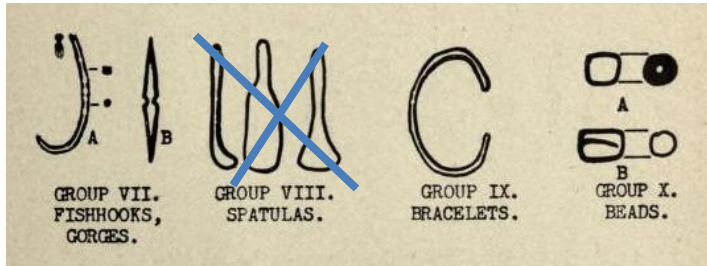
J2 = Another that might not need to be classed, this is an axe head that appears knife shaped, yet too big and without appearing to have had a handle broken off. (Canada); could be VI-A variant.

Type VII – Fish hooks and gouges

A = the typical fish hook used from Archaic times; sometimes end is grooved or thickened.

B = A gorge is bi-pointed, and notched in the middle.

C = multi-barb, looks like saw blade, or any type I-M point with more than one barb; placed here for its use in fishing (*and would move I-M here if I could.*)



Type VIII – Spatulates (see photo above)

These have been moved to other places as their definitive uses have emerged. Otherwise, this was a meaningless category.

Type IX – Bracelets (see photo above)

A = thin and rounded (one is dated to 4000 BCE in Oconto)

B = thin and flattened, sometimes with decoration

C = thick and flattened, often ornate (arm band)

D = twisted

Type X – Beads (Source for following breakdown is Ann Lewis, 2003 and the CAMD); Steinbring calls these all transitional, even if found in Archaic context.

A = Barrel beads (only Hopewell); wider in middle than on either end; Pozzo refers to these as globular.

B = Tubular beads, also called rolled, longer and less refined (identified as ROC by Overstreet and in MI). The only other bead Pozzo referred to; she was more interested in how the seams were formed, not an issue in this typology.

C = Conical (tinkling cones) (only Hopewell) (lots of modern versions, too so I'm not sure how these can be Hopewell only); Pozzo calls these beads but doesn't have them in the bead category.

D1 = round (Hopewell or pre-Hopewell only), wider than they are long, with hole in the center, unflattened

D2, flattened, also called disk, also Hopewell or pre-Hopewell only (not Oneota)

E1 = Spiral beads

E2 = Diamond shaped beads (unusual find in Illinois), refined, likely late prehistoric.

F = Longer tubular beads, for breast plates, also called hair tubes

G = Ring or wire beads, thin and twisted shut

H = twisted (MN Arch)

I = Flat and squared, with folded over flap, likely worn at waist or collar

Beads that that are copper plated over another material are considered Mississippian, in IL.

Sample of Round Beads X-D1



TYPE XI – Earspools (not in Wittry) (Michael Bradford (2017: 66) noted that this type had been Wittry's original for "rings," but that this category was eliminated in later versions. His reference appears to be Wittry 1951.)

A = Bi-cymbal (Hopewell)

B = Pulley, hole in middle for riveting (Later Hopewell to Mississippian)

If copper covered, it's considered Mississippian.

TYPE XII – OTHER ORNAMENTS (not in Wittry)

A1 = rings (all variants);

A2 = ring-shaped, too large for rings, these are probably breastplate attachment

B = pendants, various shapes, these have a hole in center top

C = gorgets, various shapes, these have two holes in center

D = round disk shaped, often with hole in center, like for breastplate attachment

E1 = Hair pin ornaments straight with décor on top edge, slightly pointed on other edge

E2 = Hair ornaments dual pins (according to MN Arch, can be crescent shaped)

F = breastplate, larger than gorget, often with holes (MN calls plaques)

G = nose rings (dated to ROC in Oneida County, Late Archaic)