Glossary of Flint-knapping Terminology

Aberrant	Deviation from normal. Odd, peculiar.
Aboriginal	Original inhabitant; primitive, simple unsophisticated.
Acuminate:	Taper-pointed; tapering gradually to the tip.
Aeolian Deposits:	Wind-blown deposits characteristic of relatively dry periods, i.e. interpluvials or glacials with low precipitation. (Francois Bordes)
Alternate Flaking:	Flakes removed alternately from the same edge from first one side and then the other. Applies to both pressure and percussion techniques. (French call bifacial alternate flaking)
Amorphous:	Denoting an irregular shape. Of no determinate form.
Amputated:	The severing of a flake, blade, or artifact either by applied force or end shock.
Angle of Force:	The angle at which force is applied - either percussion, indirect percussion, pressure, or the combination of pressure and percussion. In tool-making, the detachment of a flake or blade requires the application of force at two angles. First angle is perpendicular to the long axis of proposed flake or blade and the second angle is acute to the top of the core or the lateral margin of the artifact.
Anterior:	Top. End opposite the posterior. Example: the platform surface of a core is the anterior portion.
Anvil Technique:	Objective piece is projected on/or against a stationary object of sufficient hardness to accomplish fracture.
Applied Force:	When the type of force used to fabricate an artifact is unknown, or questionable, the term "applied force" is substituted for pressing force or percussion force until the actual technique is verified. Used until the analyst has verified whether the object was made by percussion, indirect percussion, pressure, or a natural force.
Artifact:	Derived from the Latin word "facer" = to make. Primordial objects devised, produced, or modified by man (modification may be either by intent or by function). This text is primarily concerned with lithic artifacts and the fracturing implements needed for their manufacture.
Artificer:	Same as flintknapper. See "Flintknapper".
Attribute of Form:	Characteristics and peculiarities of shape which show an indication of traits.

Attribute of Technology:	Techniques having diagnostic value which show modes of manufacture, characteristic traits, and patterns of human behavior.
Axis of Applied Force:	See "Angles of Force".

Backed: The intentional dulling of one margin of a flake or blade by removing a series of flakes from the lateral margin opposite the sharp edge. Edge is dulled in this manner to serve as protection for the hand when force is applied to use the sharp cutting edge. In some instances, the toolmaker took advantage of natural backing, such as cortex, to serve as the same dulling media. The method of blunting may be of diagnostic significance.

Barb: A projection on the lateral margins of an artifact - sometimes near the base - which slants in a direction from the distal toward the proximal end. Usually made with the notching technique. Probably made to prohibit withdrawal.

Basal Grinding: Intentional smoothing of the proximal end of an artifact to prevent cutting the serving. Accomplished by rubbing the base of the artifact on some type of abrasive material. Usually done to facilitate hafting.

Basal Portion (end): The proximal end. See "proximal end".

Basal Thinning: A technique of removing either unifacially or bifacially one or more longitudinal flakes from the edge at the proximal end. Usually done to facilitate hafting.

Basalt: Dark igneous rock with variable textures. Igneous derived from the Latin ignis = fire. A volcanic origin stone.

Baton or Cylindrical Hammer Technique: The use of a rod-like baton to percuss thin flakes or blades from the mass. The percussor should be of material which will yield when contact is made with the objective piece. Batons may be of antler, horn, bone, or wood.

Beaked: A hooked projection made by unifacial flaking. Generally made by the pressure technique.

Bending Flakes: Flakes generally detached by pressure retouch, commonly on a diagonal. This technique detaches flakes which have a pronounced curve on the plane of fracture. They leave scars on the artifact which extend from one lateral margin, past the median line, and toward the opposite edge.

Bi-directional Core: Nuclei which bears scars resulting from flakes or blades having been detached from more than one direction.

Bi-directional Flake and blade scars: Scars on cores or lithic tools which are the result of removing blades or flakes by appling the force from more than one direction.

Biface: Artifact bearing flake scars on both surfaces.

Billet: A club-like rod of material, other than stone, used to detach flakes from lithic material. Usually of wood or antler.

Bi-polar: Technique of resting core, or lithic implement, on anvil and striking the core with a percussor. Contrary to popular belief, bulbs of force are not present on both ends of bipolar flakes or blades, but, rather, there is a complete absence of the bulb scar. This technique causes the cone of force to be shattered or severed.

Bit: An insert of bone, antler, ivory, or metal into one end of a handle, or crutch, to make a composite pressure tool. The tip of the pressure tool.

Blade: Specialized flake with parallel or sub-parallel lateral edges; the length being equal to, or more than, twice the width. Cross sections are plano-convex, triangulate, sub-triangulate, rectangular, trapezoidal, and those with more than two crests or ridges. The more typical is trapezoidal.

Blade Tools: Tools made from blades which were previously detached from a core.

Blank: A useable piece of lithic material of adequate size and form for making a lithic artifact - such as unmodified flakes of a size larger than the proposed artifact, bearing little or no waste material, and suitable for assorted lithic artifact styles. Not yet to the preform stage.

Block-on-Block: Method of removing flakes by swinging the core against an anvil. Produces large thick flakes. Used extensively in the Clactonian culture. (Francois Bordes)

Breccia: Conglomerate of stone and detritus consolidated by a bonding mineral.

Bulb of Applied Force: The bulbar part on the ventral side at the proximal end of a flake. The remnant of a cone part, the result of the application of either pressure or percussion force. Commonly called the "bulb of percussion", however, this signifies only one group of specialized techniques. Since the bulb of force is produced by both pressure and percussion, the term "bulb of applied force" should be used until the manufacturing technique is verified.

Bulb of Percussion: See "Bulb of Applied Force".

Bulb of Pressure. See "Bulb of Applied Force".

Burin: A chisel-like implement derived from a flake or blade; or the modification of other implements by using the burin technique to remove the edges vertically to the long axis and/or transversely or obliquely. Generally causes a right angle edge to be formed on one or both margins. The specialized flake removed as a result of the burin break is called a burin blade.

Burin Blade: A specialized flake removed from a burin core, generally rectangular in transverse section. The dorsal side of the blade generally shows a single blade scar with lateral margins at right angles. The first burin blade removed from the core may show numerous variants, depending on the type of material used and because it bears scars of the worker's preparation to establish a ridge to guide the first blade.

Burin Core: A core made from thin, tabular flakes, blades, or lithic implements from which one or more burin spalls have been removed. May serve as a tool or a source of burin blades, or both.

Burin Spall: Specialized flake or blade removed from a burin core. Because of the nature of the core, the burin blade must be thick in relation to its length and is usually triangulate or rectangular in cross-section. Such a blade has important functional value because its form supplies strength without bulk. Made by both the pressure and percussion techniques.

Burin Scar: The negative bulb of force scar found on a core or core tool. Produced by either percussion or pressure. The mould of the cone part resulting from flake detachment.

Burin Break: Scar left on flake or blade resulting from the removal of a burin spall.

Cast: Mould which nature has filled with various mineral deposits. There are both natural and artifical casts.

Chalcedony: A cryptocrystalline variety of quartz, predominately silica and having the near luster of paraffin wax. May be transparent or translucent and of various tints. Chalcedony with different colors arranged in strips or layers is called agate. If the strips or layers are horizontal, it is onyx. Chrysoprase is green chalcedony. Carnelian is flesh-red and Sard is either greyish-red or brown.

Chalcedonic: Of/or pertaining to chalcedony. Impure; mixed; adulterated; or impregnated with foreign matter. Opaque and of various colors.

Chert: A fine-grained siliceous rock. Impure variety of chalcedony resembling flint. Generally light colored.

Chips: See "Flakes".

Chopper: Large unifacial tool with the cutting edge flaked from only one side. (Francois Bordes)

Chopping Tool: Core tool often made on a cobble by bifacially flaking one end. If unifacially flaked, it could play a dual role - that of a chopper and as a core from which flakes were derived.

Cleaver: A tool approximately U-shaped with one transverse cutting edge. Bifacial cleavers resemble truncated handaxes with straight or oblique edge at the tip. Flake cleavers are made by allowing the "tranchet" (percussion) blow to intersect the primary flake surface to produce a sharp cutting edge.

Cleavage Plane: Planes along which the mineral may be easily split. Tendency of the material to split along either the crystallography, natural structural planes, bedding planes, and/or planes of non-homogenity.

Conchoidal Fracture: A diagnostic fracture on a plane surface which resembles and has the characteristics and form of half a bivalve shell. It is the result of definite striking patterns. The striking area would be at the "hinge" part of the bivalve shell and the conchoidal fracture below on the part that was plane.

Collateral Flaking: Expanding flakes removed from the lateral edges of the artifact at right angles to the longitudinal axis. The technique is varied and does not require using ridges, or crests, to guide the flakes. Can be produced by percussion, indirect percussion, or pressure, depending on the desired size of the flaking.

Colluvium: Hill-wash material.

Commingle: To mix or mingle material from two or more sources.

Compressor: Implement used by the flintknapper to exert pressure to the artifact.

Compression Rings: Ripple rings radiating from the point of force. Can be both positive and negative - positive on the flake and blade; and negative on the core. Can be compared to ripples formed in a pool of still water after the dropping of a pebble. Compression rings are more prominent with percussion than with pressure.

Cone of Force: The formation of a cone is the result of force applied to isotrophic materials. When force is applied vertically to a flat surface, the force will spread causing a cone to form. The apex of the cone will be truncated in proportion to the surface contacted by the agent transferring the force. Each flake is a cone part - or part of the bulb of force.

Core: Nuclei. A mass of material often preformed by the worker to the desired shape to allow the removal of a definite type of flake or blade. Piece of isotrophic material bearing negative flake scars, or scar. Cores can be embryonic - such as piece of natural, unprepared, raw material with scar,or scars, reflecting the detachment of one or more flakes or blades. Or the core may be more sophisticated such as the Mexican Polyhedral core. All flaked tool industries are represented by either flakes or cores.

Core tool

Core Type: A core which has consistency of form and technological traits showing elements of culture.

Cortex: Natural surface, or rind, on flint-like materials.

Cratering: Multiple intersecting "moon-like" cones on the surface of vitreous rocks resulting from either intentional or natural pounding, tumbling, or bruising.

Crazing: Minute surface cracks - generally cross-hatched - causing the surface to be weakened. Common to over-heated siliceous materials.

Crest: Word used to denote both the raised portion on the marginal parts of a flake or blade scar and the ridge between two parallel flake scars. Edges of the concave plane of fracture. The opposite of trough.

Crude: A word often used - and widely misused - to describe character of workmanship of aboriginal artifacts. The refinement, or lack of refinement of the work must be evaluated and related to the material before the word "crude" is applied. Embryonic, inferior, or bad work found on good material could well be called "crude"; but, at the same time, allowance should be made for the "learner" or "beginner". But the finding of less controlled flaking on poor material may indicate that the worker was, indeed, a skilled fabricator to have accomplished any degree of flaking. Here, it is almost uncessary to allow for the "learner"or "beginner" for it is doubtful is they could do work on bad or inferior material. Also to be considered is the intent and ultimate design of the worker - for instance, he may have been designing a preform, drill, or digging tool and, therefore, not wanted, or bothered with, the more refined flaking character. Some analyst may consider the preform work as "crude" whereas the worker was intentionally flaking in this manner to allow for further thinning.

Crutch: A wooden staff of varying dimensions with a chest rest cross-piece at the upper end and a pressure tip inserted at the working end. The shoulder crutch is a small version of the chest crutch. Size and construction depends on individual preference and the type of work to be accomplished. Usually used as pressure tools, but can be used in a combination of pressure and percussion.

Cryptocrystalline: A fine-grained crystalline rock but having distinct particles which are unrecognizable without the aid of magnification. The size of the microcrystals determins the texture.

Dampen:	To weaken, abate, diminish.
Debitage:	Residual lithic material resulting from tool manufacture. Useful to determine techniques and for showing technological traits. Represents intentional and unintentional breakage of artifacts either through manufacture or function. Debitage flakes usually represent the various stages of progress of the raw material from the preform to the finished stage.
Debris:	Waste material - such as quarrying or mining waste - having little or no difinitive characteristics.
Denticulation:	Prominences resembling teeth similar to those on a saw. Tooth-like serrating on margins of artifacts.
Detritus:	Waste of disintegrated rocks, such as accumulated waste at a natural exposure. Having little or no diagnostic value.
Diagonal Parallel Flaking:	Similar to parallel flaking except the pressing force is directed at an oblique angle. Flakes detached by this technique resemble micro-bladelets. Same as parallel flaking except for the direction of detachment.
Diastrophism:	The process, or processes, by which the crust of the earth is deformed - flexures and folds of strata and faults.
Diffused Bulb:	Bulb of force lacking the definition of the cone part. Bulb is disseminated, indicating a broad contact with the pressure or percussion tool. Common to the billet technique.
Direct Free-hand:	A method of holding the material to be flaked in the unsupported hand and directing the percussion or pressure implement with the other hand to detach flakes or blades.
Direct Rest:	A method whereby the objective piece is supported on an anvil-like object during the flaking process.
Discoidal Core:	Bi-convex core having flakes or blades removed from the perimeter and usually on both faces.
Dorsal:	Outer surface. Keeled part of blade or flake. For instance, the dorsal side of a blade is the face of the core prior to detachment.
Double Diagonal Flaking:	Parallel diagonal flakes removed from both lateral margins and terminated along the median line but directed toward the base of the artifact. A herring-bone, or Christmas tree pattern results. A most difficult technique because one must either be ambidexterous or must completely reverse both the platform preparation and the direction of force.
Downward	

Downward and Outward Pressure: Method of coordination of muscular motor habits which allows the worker to push down and out simultaneously start detachment of a flake or blade from a core at the proximal end and, at the same time, follow through to the point of release at the distal end. Ratio of downward and outward pressure is adjusted by the worker to control the character of the flake.

Elasticity: The property of stone to return to its former state after being depressed by application of force. Ideal lithic materials are almost perfectly elastic.

Elastic Limit: The maximum stress a speciman can withstand before fracture occurs.

Elastic Rebound: The inherent property in certain materials allowing the recovery of elastic strain.

End Scraper: Beveled implement made on flake or blade with working edge on one or both convex ends. The bevel is formed by unifacial flaking.

End Shock: Transverse fracture due to the stone exceeding its elastic limits. Failure of the material to rebound and recoil before fracture occurs.

End View: When the artifact is held longitudinally to the viewer, the "end view" is either the proximal or distal end, depending on which way the artifact is held.

Eraillure Flake: An enigmatic flake formed between the bulb of force and the bulbar scar. Usually adhers to the core in the bulbar scar area. The eraillure flake, itself, leaves no scar on the core. The dorsal side of the eraillure flake bears no compression rings but the ventral side bears compression rings which match the scar left on the bulb of force. The eraillure flake is convex, concave. Example: Mendel lenz. (menicus)

Exhausted: Used up. Consumed - either from function, wear, or by the flintknapper.

Exhausted Tools: Artifacts which have been rendered useless because of resharpening. Cores consumed from flake and blade removal or from rejuvenation.

Experiment: To try to prove by experience. Regarding flintworking, the experiment remains emperical until the artifact has been verified by not only replicating the form, but also bears flake scars which have all the characteristics and features of the aboriginal stone tool.

Face: The dorsal or bentral surface of the artifact.

Facet: EEther a natural or artifical plane surface. If artifical, facet is produced by intentional grinding. The word "facet" should not be used when describing parts of flake scars.

Fact: Derived from "factum" = to do. An act or deed.

Fatigue: Undetected strains induced in lithic material causing molecular stress and weakness. Generally due to improper recovery of elasticity.

Feathering: A technique which produces a flake which terminates in an edge with a minimul margin. Produces blades or flakes with edges and distal ends which are very sharp.

Fire Checks: Distinctive minute cracks in stone, usually rectangular in shape. Appears in chalcedonic rocks which have been either heated or cooled too rapidly. May be associated with planned thermal treatment or merely be the result of accidental heat contact. Excessive heat will cause rocks to become granular and scaly and willl usually change the color to a porcelain white.

Fissures: Lines of radii usually originating at the margins of the flakes and directed toward the point of force. Fissures are not cracks but are crests and troughs. The appearance of fissures on the bulb of force usually indicates that a percussion technique was used. Fissures are also known as "ackles".

Flake: Any piece of stone removed from a larger mass by the application of force - either intentional, accidentally, or by nature. A portion ofisotrophic material having a platform and bulb of force at the proximal end. The flake may be of any size or dimension, depending on which technique was used for detachment.

Flaker: A pressure implement used to remove flakes during the process of forming or sharpening. Same as compressor The word "flaker" relates to pressure flaking whereas the implement used for percussion work is referred to as a "percussor".

Flaking: Process of removing small pieces of material from objective piece by pressure, percussion, indirect percussion or the combination of pressure and percussion.

Flake Type: Groups of flakes which bear technological attributes showing rhythms and prototypes of their mode of removal from a core.

Flat Flaking: A technique of removing flakes to result in a plane surface.

Flexibility

Flint: A siliceous material ideally suited for flaked implement manufacture. Responds well to the application of force, either percussion or pressure. Usually a fine-grained rock of the darker shades. Occurs as nodes or nodules in limestones and chalks as rounded or irregular masses.

Flints: A general term denoting all flaked artifacts made of stone. Associated, probably, with pieces of flint used in flintlock rifles.

Flintknapper: One who forms stone implements by controlling the fracture of the material. An artificer.

Flint-like: Used to refer to any lithic material which reacts like flint when subjected to force. Material having the properties of isotrophism and somewhat cryptocrystalline and homogeneous.

Flute: A negative semi-concave flake scar having parallel sides. The result of force applied to the objective piece which has previously had special preparation of the surface and platform area to accomplish fluting. A concave trough on the artifact from the proximal toward the distal end. Generally related to blademaking and basal thinning of projectile points. Produced to allow special hafting. The act of removing a channel flake the vertical length of the artifact.

Fluted Point: A projectile point bearing one or two longitudinal channel flake scars from base toward the tip on one or both faces of the artifact. Transverse section is bi-concave if both sides are fluted. If only one side if fluted, the transverse section is then concave-convex, or plano convex.

Foliate: Leaf-shaped.

Geometric Microliths: Small geometric tools with either pointed or various shaped sharp edges. Usually made by severing blades into transverse sections. Common forms are rectangular, triangular, lunate, and other forms.

Graver: A stone implement generally made by pressure and intentionally designed to have a functional point, or points. Used to incise or form organic materials and soft stone.

Gravitational Center: An imaginary point located in the center of a mass indicating the center of gravity. Must be considered when subjecting lithic artifacts to force.

Grinding: A dual-purpose preparation technique. Weakens a plane surface and strengthens a rounded surface. Accomplished by grinding the platform, core top, or margins of artifacts with an abrasive stone. Also used for forming.

Grindstone: Abrasive stone composed of bonded granules of rock. Abrasive stones with granules of various sizes and different bonding agents. Type of abrasive stone is selected to conform to the lithic material being formed or sharpened. Generally, the harder the material being worked, the softer the grindstone.

Hackles: See "Fissures".

Hand-held: Manner of holding the objective piece in the left hand while force is exerted by the right hand through the percussor or compressor.

Hinge Fracture: A fracture at the distal end of a flake or blade which prevents detachment of the flake at its proposed terminal point. A hinge fracture terminates the flake at right angles to the longitudinal axis and the break is usually rounded or blunt. Not to be confused with a step fracture.

Homogeneous: Of the same structure, nature, or kind throughout. Of like substance.

Hypothesis: Derived from the Latin word "supposito" = to suppose. Implies the existance of a fact based on what is observed.

Igneous Rock: Rock formed by solidification of hot mobile material called magma.

Ignimbrite: A silicic volcanic rock formed in thick, massive compact, lava-like sheets. Usually deposited over a wide area. The rock is chiefly a fine-grained rhyolite tuff formed mainly of glass particles welded by incandescent volcanic cloud. Often confused with obsidian.

Impact Scars: Scars resulting from using a hard percussor to deliver the force to the material, causing radiating fissures on the bulb of force.

Inclusion: An impurity or foreign body in stone which deters the homogenity of the lithic material.

Indirect Free-hand: A percussion technique which involves striking a punch-like object with a percussor. The punch is held in the fingers of the left hand with its tip rested on the platform of the artifact which is held in the unsupported palm of the same hand. Normally requires the services of a second person.

In situ: Natural undisturbed position of an object or material. Where first formed or deposited.

Intermediate Tool: A punch-like object of antler, bone, wood, stone, or metal on which the percussion blow is delivered to impart force to a predetermined area on either a core or stone tool. Worker strikes the base of the punch with a percussor.

Interval of Contact: Factor of contact time between the percussor and the objective piece. The hard percussor has a short interval of contact for it delivers instantaneous concentrated force. The softer percussor has a longer interval of contact because it is more yielding and, therefore, allows the force to be imparted more slowly.

Interval of Spacing: The spacing distance between the marginal flake scars.

Isolated Platform: A platform which has been freed from the mass by the removal of flakes to isolate or cause the platform part to protude or become prominent. Example: the platform (nib) on the base of a Folsom point on which the manufacturing tool is seated prior to fluting. Same as "Promontory".

Isotrophic: Material having the same properties in all directions. Typical of amorphous substances and of crystals of the isometric system. In an isotropic elastic medium, the velocities of propogation of elastic waves are independent of direction.

Jade: A metamorphic rock of varied colors. Gem variety is apple-green and waxy-white. A material of extraordinary toughness but only six and one-half on Moes scale of hardness. Must be formed by grinding - not flaking.

Jasper: An impure variety of chalcedony formed in various opaque colors. Adaptable for flaking and forming stone artifacts.

Keel: Ridge formed by a feathering termination of flakes at the median line. Can also be a single ridge on the dorsal side of a blade - generally on the median line - resulting from a previously detached blade.

Knapper: One who works stone by flaking, i.e. flintknapper or artificer. Old world term possibly derived from the knapping hammer used by stone masons.

Knapping: Process of fracturing stone. Formerly indicated a percussion technique but now includes the pressure technique as well.

Knife: Stone implement made to serve as a cutting tool by unifacially or bifacially flaking one edge. An unmodified flake or blade with a keen edge can also serve as a knife. Or a flake or blade with a sharp edge can be intentionally backed on one edge to protect the hand when the cutting motion is exerted to the keen edge.

Lame a crete:	First blade removed from a core. Bears bi-directional flake scars on the dorsal surface, the result of the worker preparing a ridge to guide the blade.
Lanceolate:	Lance or spear-like.
Lateral Margins:	Margins of flakes, blades and other stone tools on either or both sides of the longitudinal axis.
Leading Edge:	Working part of either the stone implement or core which is nearest the knapper. Edge of the objective piece facing the knapper.
Levallois Technique:	A special core preparation technique which allows the percussion removal of flake implements requiring little or no modification. The Levallois tool is plano-convex and is characterized by intersecting flake scars on the dorsal side. Generally, only one or two useable flakes are detached before the core is discarded. This technique encompasses several methods of flake removal.
Lip:	Projection found on core, flake or blade or stone tool which results from the bulbar scar. A concavity causing an overhang. Usually found on the leading edge.
Lithic:	Derived from the Greek word "lithos" = stone. Pertaining to stone.
Longitudinal Lateral Section:	The area of the artifact bounded by the proximal and distal ends and both lateral margins.
Longitudinal Transverse Section:	The thickness of the artifact between the dorsal and ventral side and bounded by the proximal and distal ends.

Marginal Fissures: See "Fissures".

Marginal Grinding: Process of smoothing edges prior to flaking to make margins stronger and more regular and to facilitate hafting.

Mass: A quantity of matter forming a body.

Mechanics of Fracture: The principles of motion and force applied to isotrophic material to accomplish a planned and preconceived fracture.

Median Line: An imaginary line pertaining to the middle part of the artifact from the proximal to the distal end. Can be on either face.

Menicus: Concave on one side and convex on the other (See eraillure flake)

Method: A characteristic mode, or manner, of procedure.

Microblade: Small specialized flake three times as long as wide with parallel or sub-parallel lateral margins. Dorsal side must bear two or more scars resulting from previous blade removal which point in the same direction as the blade is detached from the core. Diminutive blades generally made by the pressure technique. Common to some Arctic cultures. (see "blades").

Microburin: Waste product not intended for function. Usually the proximal or distal end of a blade. Residue of geometrical microlith industries. Not to be confused with either a diminutive burin spall or burin core. Can be made by a special technique of severing prismatic blades.

Microburin Technique: Method of severing blades to make geometrical microliths. Technique requires first weakening the blade by marginal notching and then breaking it at the notch.

Micro-core: Nuclei. The material remaining after microblades have been detached from the mass.

Micro-flake: Diminutive pressure flake resulting from forming, serrating, notching, and retouching.

Microliths: Very small geometric-form tools commonly used in composite tools. Formed prom prismatic blades, using the sharp unmodified lateral edges as the cutting edge.

Mingle: To mix or mingle material from one source.

Morphological Typology: An unreliable method of typing stone tools according to form alone. This can be misleading, for tools having the same form may well have been produced by different techniques, have different technological attributes, and could have been intended for different functional purposes.

Multi-directional Core: Core bearing scars which show that flakes or blades were removed in more than one direction.

Naturefacts: (Pseudo tools) Pseudo artifacts caused by natural soil movement, glaciation, wave action, high velocity water movement, gravity (such as alluvial fans or steep inclines), rapid temperature changes, internal pressure (such as starch fractures and pot lids), exfoliation, tectonic movements, diastrophism, solifluction, foot trampeling and other unintentional activity caused by nature rather than by man. These conditions can detach flakes from the mass in such a manner that the piece may resemble an embroynic tool.

Negative Bulb Scar: Scar made by the removal of bulb of force when detaching a flake or blade. Usually associated with the core.

Negative Bulb of Force: Slight depression at the proximal end of flake or blade scar. An imprint of the cone part always on the objective piece and not on the flake or blade.

Non-undulated: Flakes and flake scars showing the absence of compression rings on the plane of fracture. Related to material and special techniques.

Notching: Technique of indenting the base of a projectile point or knife to facilitate hafting. Usually by the pressure technique. Several traits may be identified. Deep serrations are a style of notching.

Nuclei: The core. Nuclī= singular; nucleous or nucleuses = plural. A central mass or a kernal. Part remaining after removal of excess material, or after flakes or blades have been detached. Core tool could be a nuclei artifact.

Objective Piece: Lithic material being worked or formed by various techniques. Can be nodule, flake, blade, blank, preform, core, uniface, biface or any permutation of object to completed form.

Oblique Flaking. Flakes removed diagonally to the long axis of the artifact. Parallel flaking directed diagonally across the surface of the artifact. Generally done by the pressure technique.

Obsidian: Igneous glass, volcanic rock. Generally black although some deposits are red, green or brown. Is often banded and of different degrees of transparency. Well suited for flaked implement manufacture for it produces a very sharp cutting edge.

Obscure Side: Term used to denote the underside, or unexposed face of an artifact. Used to help explain the holding method during pressure flaking. For example: During the pressure flaking process, the artifact is generally held flat in the hand and flakes pressed off the face resting on the palm. This face is not visible to the worker and, therefore, it is called the "obscure side".

Overhang: See "Lip".

Ovates: Long oval implements. Can be blanks or preforms. Elliptical. Bifacial or unifacial.

Parallel: 0 to 180 degrees.

Parallel Flaking: The last of several stages of pressure retouch. Artifact surface must be regular and uniform before precision parallel flaking can be accomplished. The flakes detached resemble micro-bladelets and are removed in sequence at right angles from the lateral edges.

Patina: An alteration of the surface by molecular or chemical change and not to be confused with sand blasting.

Percussion Flaking: A method of striking with a percussor to detach flakes or blades from a core or mass. Percussion flaking includes varied techniques to remove flakes by either impact, collision or concussion.

Percussor: An implement used for striking. Includes hammers, hammerstones or billets.

Permutation: Interchange. To change one thing for another.

Perpendicular to Plane of Fracture: Axis of longitudinal median line of flake and flake scar.

Phylogeny: The line, or lines, of direct descent in a given group.

Picks: Long, narrow, thick core tools. Prominent keel on dorsal side and plano on ventral side. Pointed on one or both ends.

Plane of Cleavage: The splitting, or tendency to split, along planes determined by crystal structure, or by bedding planes in sedimentary rocks. Parallel planes of weakness within the structure which destroy the homogenity of the lithic material.

Plane of Fracture: The surface on the ventral side of the flake bearing the positive scar of the bulb of force; the negative scar being on the core or stone tool.

Plano Convex: Flat or ventral surface - curved on dorsal surface. Common to unifacial artifacts.

Platform: The table, or surface area, receiving the force necessary to detach a flake or blade. Can be either natural or prepared. The truncation of the cone part.

Platform Angle: The angle of the platform measured from the dorsal to the ventral side. At right angles, or less, to the longitudinal axis. Angle of platform on flake or blade corresponding with parental platform angle of core.

Point of Contact Platform part; or cone truncation. Point of the forceful meeting of percussor, or compressor, and the objective piece.

Polishing: To make smooth by rubbing with fine abrasive material. Strengthens the platform. Can also be the result of function.

Polyhedral Core: Nuclei. Core bearing multiple blade scars. Generally cylindrical.

Positive Bulb of Force: Rounded (onion-shaped) protuberance found on the ventral side of a flake or blade at the proximal end. Bulb is part of the cone of force.

Posterior: Bottom. Base. Opposite of anterior.

Pot Lids: A plano convex flake leaving a concave scar. These are the result of differential expansion and contraction of isotrophic material but are minus the compression rings of force lines usually associated with these conditions. Generally they are a natural occurance rather than intentional results of man-made flakes.

Precision Thinning: A precision method of thinning by which the worker controls the direction and termination offthe flakes at the median line of the artifact by applying either the parallel or collateral flaking technique. Flakes are intentionally terminated in a hinge or step fracture at the median line to allow flakes detached from theopposite margin to meet and intersect these fractures.

Preform: Pre = prefix denoting priority, first. Form, from the Latin "forma" = to shape. Preforming denotes the first shaping. Preform is an unfinished, unused form of the proposed artifact. It is larger than, and without the refinement of, the completed tool. It is thick, with deep bulbar scars, has irregular edges, and no means of hafting. Generally made by direct percussion. Not to be confused with a"blank"

Pressure Flaking: Process of forming and sharpening stone by removing surplus material - in the form of flakes - from the artifact by pressing force rather than by percussion. There are various individual techniques of pressure flaking.

Primary Retouch: Removal of irregularities on the artifact by the pressure technique to make the piece ready for the second retouch.

Primitive: Pertaining to the beginning or origin, or to early times. Original, first, primary, primordial.

Prismatic Blade: Long narrow specialized flake with parallel sides. Generally triangulate or trapezoidal in section and bearing two or three prism-like facets on the dorsal side. Associated with blades removed from a Polyhedral core.

Projectile Point:	Spear, dart, or arrowpoint.
Promontory:	See "Isolated Platform".
Pseudo Tools:	See "Naturefacts".
Punch:	An intermediate tool of antler, bone, wood, metal or stone used in the percussion technique. Punch is placed on the objective piece and receives the blow from the percussor.
Punch Technique:	A method of applying percussion force to an intermediate tool (punch).

Random Flaking:	Multi-directional, multiform and without order for making the artifact regular in form. Used without further refinement; or a stage of primary retouch prior to precision flaking.
Recoil:	Rebound. Recovery from the shock due to the sudden application of force. Does not exceed elastic limit of material.
Rejuvenate:	To renovate, renew, restore, re-create, or re-establish.
Residual Core:	An amorphous core without definite form, having the platform area exhausted. Bears scars denoting the removal of flakes or blades.
Retouching:	A technique used to thin, straighten, sharpen, smooth and make the artifact more regular in form. Generally involves the use of pressure in one or more stages. Retouching usually follows percussion preforming. Before precision pressure work may be accomplished, one must first remove all irregularities on the objective piece by a primary retouch and then do a secondary retouch.
Ridge:	A projection. The intersection of two surfaces forming a salient angle. The median longitudinal lines of an artifact which is romboidal in transverse section. Long crest, or spine, either natural or formed by unifacal or bifacial flaking. Generally used to guide the blade from the core.
Ripple:	Waves appearing on the plane of fracture. Compression rings. Characteristic to solids which have the properties of viscous liquid.

Salient Bulb: A bulb of force having good definition of the cone part. Indicating a confined contact area of force.

Sandstone: A sedimentary rock composed of sand and bonding mineral. Generally used for grinding and polishing. Very compact and homogeneous varieties can be formed into various artifacts by percussion flaking.

Scalar Flaking: A technique which produces irregular expanding, overlapping flake scars which resemble scales. May be the result of pressure or percussion.

Serrating: Indenting the edges by alternating the removal of flakes; or the repeating of notches at regular intervals.

Shearing: Technique of turning the edge by wiping a rod-like pressure tool along the margin while pressing inward. Rapid method of platform preparation prior to pressure flaking, and for forming.

Shear Stress: To sever from opposing forces.

Side-view: The lateral edge, or margin, of the artifact when it is held horizontal to the viewer.

Side Scraper: Implement with beveling on one or more margins of a flake or blade to obtain a strong cutting edge.

Siliceous: Of/or pertaining to silica. High silica content.

Silicification: The introduction of, or replacement by, silica.

Silicified Slate: Slate with a high silica content causing it to be much harder than normal.

Silex: A term commonly used to define Old World rocks of a siliceous or chalcedonic nature. Possibly derived from the French word "silex" = flint. Not to be confused with a trade name of a manufactured glass.

Sinuous: Snake-like, alternating, or wavey. Margins of artifacts are made sinuous by removing flakes alternately from the lateral edges.

Slate: Metamorphosed fine-grained sediments with well-defined cleavage. Artifacts are formed by grinding rather than by flaking.

Snapping: A method of producing a transverse fracture to sever flakes or blades. Pressure or percussion force is applied from the ventral surface toward the dorsal side.

Solifluction: The process of slow movement of water-saturated ground masses from higher to lower levels. Movements of earth may cause "Naturefacts" to be formed.

Spall: See "flake".

Split Cone Technique: At present, the technique is egnimatic but has been observed on artifacts found in cobble implement industries which have had large exterior flakes removed from the cobble's surface. These flakes have no bulb of force, the result of the worker using the anvil technique and splitting the cone of force. This technique has been noted by Charles Borden on the Frazier River artifacts, and by others.

Step Fracture: A flake, or flake scar, which terminates in an abrupt right angle break at the point of truncation. It is either the result of the dissipation of force, or the collapse of the flake.

Strangled Flake or Blade: Intentional flaking directly opposite on both margins to make a constriction, or narrowing.

Stronger Platform: A platform which has been strengthened either by polishing, or by providing a greater area to receive the applied force.

Summit: Protuberance. High point. Apex. (See "Crest")

Tang: See "Barb".

Taxonomy: Science of systematics. Arrangement and classification according to relationship.

Technique: The word "technique" applied to stone tool manufacture denotes the method, execution, performance or manipulation of a definite practice of forming lithic material; but reflecting distinct flaking character and patterns and displaying technological attributes.

To make, fabricate, or pepare stone tools under certain identifiable conditions. Example: Blade-making, per se, is not a technique. But blades made by simulated conditions represented by varieties of platform preparation, degrees and kinds of force, angles of force, rests or anvils, rhythms and muscular motor habits, and diversified fabrication implements will represent a technique.

A single technique can range from one consisting of only simple, basic principles to one encompassing a combination of conditions which remain fairly constant by requiring a variety of complex patterns. Example: Simple and basic technique: removing a simple flake with a sharp cutting edge from the mass. Complex Technique: Fabricating a Folsom projectile point which requires elaborate and exact preparation to remove dorsal and ventral channel flakes.

Techniques: Methods involving technological traits.

Technology: The study of techniques. Science of studying and interpreting the combined or distinct attributes of individual techniques. Implies a systematic control of minute and distinguishable detail.

Technological Attributes. Techniques which have diagnostic value showing modes of manufacture, characteristic traits, and patterns of human behavior.

Technological Traits: Showing attributes of technology; individual or traditional.

Thermal Treatment: Method of altering siliceous materials by exposure to controlled heat. This treatment makes the stone more vitreous.

Theory: Derived from the Greed word = to contemplate, reflect, or speculate. Sometimes equivalent to hypothesis - at other times equivalent to general law or truth. A theory can sometimes become a complicated hypothesis.

Thickness: Measurement of the denseness between the dorsal and ventral sides.

Thinning Flakes:	Flakes removed from a preform either by pressure or percussion to thin the piece for artifact manufacture. Thinning flakes are also removed to thin a biface or a uniface. Usually shows special platform preparation.
Tipping:	The technique of making a tip, or point. on the distal end of an artifact. Several methods may be used to accomplish this.
Top of Core:	Proximal, or platform part, of the core.
Tradition:	Established custom. Historic style.
Trajectory of Force:	Curve or straightness at which force is applied to the objective piece.
Trajectory of Fracture:	Curve or flatness of flake and flake scar.
Tranchet blow:	Technique of striking to sharpen or re-sharpen cleavers and handaxes. Blow isstruck obliquely to the marginal edge to remove a flake crosswise and at right angles to the main axis of the tool, leaving a sharp transverse edge.
Transverse:	Crosswise.
Transverse Flaking:	Parallel flaking directed horizontally to the long axis of the artifact and meeting at the median line.
Transverse Projectile Points:	Old World points made from a section of blade with the lateral margin serving as the tip of the point. When employed, they cause profuse hemmoraging.
Transverse Section:	The area bounded by and between the lateral margins.
Trough:	Depression or hollow between crests. Low point between flake or blade scars. Channel scar left by flake or blade removal leaving a concavity from the proximal to the distal end of the plane of fracture. Single trough is known as a flute.
Turned Edge:	Marginal edge that has been beveled by shearing; or removal of multiple flakes by pressure or percussion.
Typology:	Science of classifying stone tools by form, techniques and technological traits. Must include duplication of the technique by first observing the intentional form, then reconstructing, or replicating, the tool in the exact order of the aboriginal workman. Shows elements of culture. Typeology cannot be based on function.

Undulations: Similar to compression rings and ripples. Common to blades when the downward and outward forces are not equalized.

Uni-directional Core: Cores showing that flakes or blades were removed from one platform surface and in only one direction.

Uni-directional Flake or blade Scar: Scars on a core denoting that force was applied in one direction only. The lateral margins of these scars intersect previously removed flake or blade scars.

Uniface: Artifact flaked on one surface only.

Unifacial: Objective piece bearing flake or blade scars one one surface only.

Unilateral Parallel Flaking: A type of diagonal flaking made by bending the bladelets from one edge to the other and terminating them by feathering before they reach the opposite edge. May be made by either palm or finger holding of the objective piece.

Ventral: Plano side, or inner surface of flake or blade. The under surface.

Visible Side: The apparent face of the artifact. The upward, visible face.

Vitreous: Having the near luster of glass.

Waste Flakes: Discarded flakes not suitable for function. Usually resulting from platform preparation, trimming, removing of cortex, and discarded non-homogeneous parts.