In the importance of flint and the development of man, one might say that flint was the mother of man. In all the phylogeny and the development of man, man's hands would have been like an animals today had it not been for the stones of flint or allied materials and man's usage of the flint chips and the tools.

By the use of the chips, his hands developed to where he could increase his agility in manual dexterity in the production of better and better tools. There has always been the problem of whether a chip of stone was man made or natural. By the study of the flakes it can be very definitely decided which was man made and which was natural if there is a group of the artifacts in question available. All of them have a pattern. Man had a pattern and he developed traits and habits in producing these chips. In order to hold or support a piece of flint certain mechanical features develop in the fracture of the flint. Though we have all of these pieces of stone that were detached in the production of artifacts, or used just as they were, they have very definite characteristics in mechanical features. All the individual flakes have physical features caused by definite mechanical problems dealing with material in types of force and angles of force that is applied to the stone. There is a pressure or the percussion and there is the resiliency of the tools and the support of the core or the core to be. Each operation or each mechanical thing shows up on the result of the flake. By the classification of these flakes one may determine the angle that the stone was held. By nature it can only be supported in perhaps one or two angles. When man held it in order to produce a tool he had many angles, and he had to think these all out in order to produce a usable flake of material that had a sharp cutting edge. By the classification of all of the flakes one will be able to determine the techniques of manufacture, and then we can come to the analysis of the form of the artifact, and then we can have the theories of function. This all may play some part in the cultural analysis of the history of mankind.

What we will try to develop is a uniformity of flake terminology. This will create the universal understanding of the result in forms. We may have different terms for certain forms and functions as well as spatial distribution. This will allow for greater variation of forms and hafting techniques without having such sharply defined classes in order to determine the types. It won't make a great deal of difference in some of the functions if there is a little different term, because they will all mean approximately the same thing. But by having a uniformity of the flake terminology in the manufacturing techniques, one will end up with a uniformity in form and hafting techniques. We could, by understanding the mechanics of flake removal, know how much finer factual knowledge of the manufacturing techniques are for classifying the artifacts produced. For a consistent analysis, perhaps some day we will have to use an electronic data computer because the amount of artifacts found up to date has probably been an infinitesimal part of the amount that was produced. We have yet to have represented groups of artifacts that have been affected by erosion and covered by dust, silt, and soil. What we need are artifacts grouped according to uniformity and general appearance, to be analyzed to determine the group of people. Little by little, even in the last twenty years, these strives in archaeology have been tremendous. It is a new science. One that considers, first, the amount of finished artifacts found, not their rejects or those brought back into their habitation centers or discards on many of the preforms that were never finished. They may have had flaws in the stone, or were discards, and from these discards in broken artifacts we have to determine the cultural levels. But in these same habitation sites there are many groups of flakes that were used in the manufacturing of these tools, but will show a different characteristic as to what type of tool was made and its use. By analyzing these flakes, and there are very definite categories that they do fall in, one is going to determine the manufacturing techniques and also the ranges of the people and their cultural techniques.

I would like to start with flakes and later go on into the method typology or the manufacturing techniques. To get a uniformity of flakes I will call them all flakes, however, we have chips, spalls, fragments, and many pieces of flint. I feel that we should deal with flakes, they being portions of material detached by percussion, pressure, or both, from a core or a larger piece of material that is flint. That original flake itself was a resultant flake. We have the problem of determining the difference of stones breaking by natural phenomena and being detached by man. The character of the detached pieces of stone or chips done by nature or by the elements are very different. We will go into the differences of these, but first I would like to outline how we may be able to get fragments of stone whether they are man made or by nature. The natural ways a stone may be broken are by the elements of expansion or contraction. Again, with certain stones they have an internal pressure such as obsidians. They have an internal pressure of not being a balanced stone. Obsidian has a tendency to recrystallize. In this slow recrystallization process the stone is weakened and there are flakes exfoliated on the outside and leaves a form something like a core. If it is subject to heat, sometimes these are similar to the heat fractures. In other natural expansion and contractions as according to freezing, some could even take part with disastrophism of the earth if it is a ledge type of formation of solidified clay and various types of flint in their forms which will go into the geology of flint and flint-like materials. You will have a fracture that some of this is blocking and it will break up in large cubes. The other is the basalt group that you will have those that go into a columner crystalline pattern where there is an expansion and contraction or a break away of one mass from the other by shrinkage. You will find that there is no bulb percussion and no lines indicating force and pressure from a given point. Certain types of flint have a higher water content than others and freezing causes them to be covered with opaline, but when the flake is popped off there is a nucleus. It doesn't all chill and heat at the same time in order to cause this drastic contraction and expansion, but it does give an effect that is readily determinable by studying the type of flake that has been removed. The flake itself usually has a bulbar portion to it, a maternally effect with a nipple in the center. From one point of contraction and expansion a flake will give a very different effect, this is a pressure or percussion type of a fracture.

Sometimes, from the waves striking rocks, stones are picked up and thrown one against the other. These will be on one angle. They will have a bruising effect on the outside and they are covered with moons. They will have the tendency to become like cobble rocks or pebbles. The natural thing in a continual churning and abrasing action is to round all the corners. When it becomes completely rounded then the stone will have to be either lifted up or struck by another stone in order to fracture. Usually when you have this type of a breakage it will be laying against another stone, not in a loose sand, and it will have a compression style of a breakage which is readily determined. Perhaps some very early eoliths may have been crushed, but if they had a usable flake they were usually right angled flakes and not sharp cutting edge flakes. They are somewhat similar to a burin type of a flake. These are thick, not a concoidal fracture. They will be of the same angle if a stone is wedged and another stone strikes against it. The angle is going to be almost constant and it will not resemble an artifact. Even some of the early eoliths will be entirely different. If one had a series for studying flakes or nodules, it could be readily determined from the force lines and direction of forces in your striations and undulations as to whether it was a man made produced blow or from the tides. The same is true of stones getting battered and bruised, beaten and abraded in waterways tumbling down inside of a mountain, i.e., alluvial gravels and talus slopes. But a repetition of more than two or three flakes is very unlikely. With tumble fractures one does have to be concerned with whether they are a product of forest fire, range fire and prairie fires ~~started by lightning, brush, etc. or of t~~

started by lightening, brush, etc. or of the natural things that could take place. There are stones that have been heated and thermal fractures not done by man. There are accidentally overheated stones. Sometimes even artifacts that have been in the household fire and have been over-heated and checked will be entirely different from man's planned thermal treatment of flakes. So with past types of natural things that can cause these breaks they are very different than anything caused by man.

I am trying to put the various flakes in their proper categories. This is just a rough draft of the different flakes and later I will try to describe the different methods of use of this particular flake. Each flake has a certain characteristic and these will be separated into their proper category and later show the utilization of these flakes from the simplist sort of tool to the most complex.

First we have the micro flakes, and then the small flakes, medium flakes, and large flakes. Now with the micro flakes we have those that will result from fine retouching such as the edges of scrapers for sharpening and fine retouching, notching, and serrating. In fine retouching it is unfortunate that normally one only has the proximal end of the flake because the distal end and the middles are usually broken. When the tool is retouched it is held in the palm of the hand supported on a piece of protective leather, bark, or some media, and as the flake is pushed off of the stone it is pressed down and followed through. In doing so, it has a tendency to shatter, so those are seldom seen unless one uses a very fine screen for their sifting in the sites. But the proximal ends will show a great deal of character. Also with your notching you will get very fine half moon types of flakes for certain types of notching. It is a direct pressure against the edge of the blade and as that is pressed inward and outward this round half moon flake results. It is very similar to a regular concoidal fracture only it will have an indentation in the top that conforms with the width of the notch itself. In serrating, the flakes, of course, will be a great deal similar because the notching and serrating are very closely associated,

except for the crushing type of serrating.

other than the crushing type of serrating.

With the small blades those will be used for small tools. As they are removed from knives and small arrow points, and coming from a core in a repetition they will have formed and will indicate whether they were used as a thinning process in thinning an artifact biface or whether they were struck with a billet or struck with a stone. It will also indicate whether they were removed by pressure and the type of platform preparation.

Your medium flakes will be a little larger but will be in the same category.

Before we go to the large flakes I would like to mention about the different specialized flakes that one has. The specialized would be those which are still a flake, but since they have such definite characteristics they probably should have a separate classification.

On prismatic blades and some of the work done in Europe and regular blade cultures there was a special technique in the detaching them. There was a special technique in removing Central American them. There was a special technique in removing some of the Central American prismatic obsidian blades. There is a platform preparation with some of these but they are very distinct. They have parallel sides, and some are single dorsal ridges that are used in guiding the flake. Some have the two ridges and there will be others that maybe even have three or four. The primary classic type of a blade is a straight parallel side with one, two, or more ridges down the center.

The micro blades are thick little triangular pieces, probably used for drills or for small razors. This is another definite technique and these would be difficult to find as it would be almost as hard to locate some of your micro flakes that were used in fine retouching.

Burin blades are detached from the edge of a tabular piece of flint, a tabular flake, and these Burin blades have square sides with no ridges. In cross section theses will be generally rectangular because when they are detached the surface on the edge of the flake is removed, splitting the flake from one of the leading edges, producing a chisel point on the blade itself. These microblades may carry entirely through depending on the techniques or methods used, or using a hinge fracture; so, on the burin itself (not the blade detached) there shows a series of steps as these were removed. Now where that process has taken place, the end character or the distal end of the burin blade (not to be confused with the burin flake) I will discuss later on. These will show a definite character.

With the small, medium, and large blades we also have another dimension that should be considered. This dimension for the short flake, whether it is small, medium, or large, should be a concoidal flake so the length is equal to the width. A medium flake would be one where the width would be equal to two times the length. On a long flake the width would be equal to three times the length. The extra long would be four times. So in using this category you can see that in your retouching, if you had a lot of the long ripple flakes carrying past the center and they were very close together, it gives a good relationship. Also we have thickness, and with the thickness we have the thin and the normal. Under the thick ones are a tabular type flake. Tabular flakes have right angular sides. When these are removed from a block of stone or sections of cleaved flakes, or sections of pebbles, sections of cobbles, sections of nodules, they can be reworked and thinned to produce other artifacts. Some of these, of course, will go into the category of possible scrapers. That is, some types of scrapers will come under this category. Sections of cleaved flakes that have a right angle, or where the flake has broken in the center, can be flaked at one end to produce a burin, and burin blades can be removed from the burin flakes.

On a straight flake, no matter how straight it is, there will probably always be the distal end. It will curve inward towards the nuclei or towards the core of the stone. Because this material is semi plastic, as it tears off the edge on the distal end it will always have a projection following back underneath, if the flake was entirely removed. If it was broken off short to use as a thinning flake, it will have a hinge fracture or a rounded edge, which is readily seen. This also will go into one of the scraper type categories. Some of these will feather out and be sharp at the edge, some will be straight, and some will be strongly curved. A spiral is when the flake has been bent clear over a curved surface and creates a spiral type flake. All of these flakes will have one dorsal ridge or two or more dorsal ridges, not necessarily of regular size.

In studying the flakes that have been removed from a core, you will find the proximal end or the end receiving the pressure will show a great deal of character regarding the manufacturing technique. The sizes of platform will indicate the size of area where the hammerstone or the pressure tool contacts the stone. Here you can see exactly the surface that contacted the tool used in removing the flake. The proximal end will show the preparation before the flake was removed, or it will show a prepared platform. There will be a character of the bulb of pressure or percussion. Each one will have a portion of a cone which is, of course, the bulb. There is a scar from percussion. If it is a direct downward percussion the scar will show on the flake right up near the bulb where it received pressure. With pressure there will be no scar because this tearing away from the mother piece of rock, or from the nodule, or from the core itsels, pulls too fast and it will leave that scar that can only be done by percussion. Not with all percussion, but if the blow is a direct downward blow and a very deep bulb of percussion, you will find the scar. You will also have striations down the sides or rather pointing towards the apex of the blow in the direction of the blow. Those will be radiating from the blow. They will point to the direction that the force was struck. There is also the angle of the platform to be considered. This determines whether it was removed from the side of the blade and if a billet or a piece of hammerstone was used. Some of these will be polished and some will be abraded. The polished flakes have one purpose, to give the point of impact or pressure strength. If it is abraded it is so that it will be released similar to ground glass or scoring. As an example, scoring glass with a glass cutter will give you the same effect as abrading. So if it an abraded surface the flake can be detached. This is used with a pressure technique, and in detaching blades or the specialized flakes. Looking at the character of the distal end of the flake you will find that some are feathered out edges that go out to a razor edge all the way around or at least on one leading edge. It will be feathered out and it will be a good surface for the cutting edge. You will find the hinge fracture was produced by a certain technique that will have a round hinge at the distal end where it hadn't carried entirely through and the flake, you might say, wasn't completed. You will have shock fractures that will give you right angles radiating fracture shocks that will not feather out, but they will be at right angles. Usually this will be in a discard group because from shock fractures the stone cannot be depended on. There are internal stresses and strains, therefore, not suitable for use as tools. They can be used for burins. The end character, as the flake leaves the nodule or the core, will take along a certain portion of material so it will be much wider and thicker and heavier than the proximal end where the force was applied. These ends or chips are also used in one of the scraper characters. Certain groups of people preferred this type of an end for their scraper.

Thermal treatment is a method used on heated and unheated stones. The heated stones were probably prepared in one of the household fires underneath sand or soil and heated until the moisture was driven out, at a temperature of possibly 1000 to 1100 degrees. The thermal treatment was used to produce a more glassy, more usable material than a normal freshly quarried, or untreated piece of stone.

It can be determined whether or not a flake has been fired. On the under side or on the concave side of a flake that has been shaped into an arrow point, there will usually be a facet where it hasn't been retouched. However, if the entire surface of the artifact has been retouched there is no way other than the lustre of the stone. It will resemble opal or be a little closer to the obsidians type of stone rather than granulite texture. You will find, quite commonly, that there is a portion of this facet on the under side or even on the dorsal side, but I feel that the curved side or the concave side of the artiface will show whether it has been heated because a part of this will be as the original part of the stone before it was heated. After the flakes are taken off it will all be shiny, but is a portion wasn't entirely flaked it will show the original texture of that core. All flaked stone artifacts, we might say, are cores if the surface of one or more sides are covered with flake scars. The cores, of course, do produce flakes and blades.

There are several different types of cores, such as the symmetrical and the conical style. The symmetrical is like the Central American. The Mexican obsidian industries used a symmetrical core. The rectangular core, or Mississippi Valley, was used in Siberia by some of the deme culture. They were again reused, possibly as a special type of a scraper or for some special function such as a utilitarian function.

Then there is the uniface core which is a turtle back, and a little similar to the conical core but a flatter artifact. The biface is where they have been worped all over. Some of the cores sre entirely utilized so we actually donlt see the discards or the cores worp discard. The utilized cores and the flakes detached there were used for flake tools and various flake tool artifacts. This prismatic flaking or the pressure type flaking was to produce a specialized flake. Specialized flakes are readily obtainable from your normal flakes.

Normal flakes were generally done by percussion and specialized flakes were done by intermediate percussion or intermediate pressure or pressure alone. Materials play an important part in flintworking techniques or industries ofIthe primitives. Flint and flint-like materials (silica) forms your microcrystalline quartzite. There are many different varieties and kinds of flint-like materials. A few of them are: chert, chalcedony, jasper, agate, petrified wood, agatized and opalized wood, quartzite, ryolites, lava, sandstone, quartz, crystal, and opal. These play an important part in the degree of skill that is shown in the finished artifact. It will be variable from the degree of crystallization. One might say that scale between the two would be the difference between opal and obsidian, probably the finest textured of the group. Sandstone and quartzite would probably be the most coarse. The only one that doesn't hold true in the degree of workmanship that could be produced with a certain type of material are crystalline forms such as quartz crystal and some big pegmatite quartz. This does have a cleavage plane, there is a conchoidal fracture;

quartz. This does have a cleavage plane, there is a concoidal fracture, but there is a very definite cleavage plane if the crystal has not been divided or the large flake for producing the artifact was taken off with the proper axis of the crystal. This shows a slight step plane in the fracture or the flake removed. Opal and obsidian are very fine-grained and extremely glassy with sharp edges. They will have an entirely different edge effect than the coarser materials, such as sandstone, lava, and ryolite.

It is amazing how some ancient people were able to fabricate beautiful tools out of even poor materials. They, therefore, had greater skill in producing these fine artifacts from very coarse materials than some of the others who had the ideal materials, such as obsidian or the finer chalcedonies. A heat-treated chalcedony has a lot of strength and allows the worker good control. You can compare obsidian and ignimbrite. With ignimbrite the edges will break down and won't stand the pressure. Apparently in the fusing of volcanic tubes, fine glass, and with silica bearing waters, ignimbrite is not as strong as straight glassy obsidian. Therefore, if one applies pressure to the edge of an ignimbrite tool it has a tendency to crush before the flake is entirely detached.

All of these materials have certain identifiable characteristics. To ancient man their meaning was a great deal different than it is to our mineralogists and geologists of today. Here we have a giant laboratory, the earth. When these minerals were formed it was like stirring up all different kinds of chemicals in association with the silica. We will have many variations. The variations can prove to our advantage by the proper analysis in the relation of using them for artifacts. The colors some have is due to the larger content of iron. There are various different chemical forms and by the proper analysis certain quarries will be outstanding if the material is of some particular form or certain character. Not all of these materials can be traced to that particular quarry because there is such a tremendous overlap that even mineralogists will give you many different names for practically the same thing. There can be an agate like jasper or a jasper like agate. Opal varies on into the jaspers and the agates. To draw hard and fine lines between materials would be difficult, but a lot of the sources are quite evident if one has the jaw cliffs of where certain types of flint comes from. There are limestones that show another type of chert and flinting materials, and vesicles in the lava rock will have another. The obsidians are quite variable. The Mexico obsidian and the Glass Butte and Central Oregon type of materials will be very different from obsidian in Idaho. Each one apparently has a little different mineral analysis or the constituents that make up these particular minerals are variable. Yet, they are characteristic to a certain geographical area where certain chemicals and chemical salts were present during the formation of that mineral. By knowing the analysis of some of these materials that seem to have distinction, one might well determine the geographical range of that material.

It might be one of the other niches in the story of man. Each man, in his search for materials that he could use for the production of artifacts, seems to have covered almost every area. In my search for materials to experiment in flintworking, I have yet to find the site where prehistoric man hasn't been. He was able to find the best of the materials. He would leave the stones that would have inclusions and stresses and strains in them. Some of them had cavaties, crystal pockets, and cracks, and others had certain cleavage plains. He was able to sort these materials out, for he knew which would alter when subject to heat treatment, and in all he had a great deal of skill in his geological comprehension of where these materials were. Apparently, he knew just exactly where to look. They must have had trade routes to these various sources of materials as well, and a lot of trade was no doubt carried on with very desirable materials. These flint-like materials all have identical characteristics. One could assign this material as to origin. A breakdown of the types that would probably interest the archaeologists would be the type of stone and the source. The source would be quarries, cobbles, veins, vesicles in lava rock, and numerous other occurrences. The texture of the stone is also important, whether it is lustrous and granular, and also the color. If these things are known, I feel that they will have importance in tracing perhaps the geographical area of the particular type of flint-like material.

We've discussed the flakes and the materials. Now the adaptation of these flakes that were removed from the artifact and the surface of the artifact will show the manufacturing techniques, or perhaps you could call it the method typology. There are three things of importance, that is the surface, the edges, and the basal aspects. With all artifacts, of course, we have the dorsal and the ventral sides. The dorsal, I feel, should be the highest ridge if it is not exactly a biface. If there is a flat side, the high ridge or the back bone would be the dorsal side. The flat side would be the underside of the artifact, such as with a uniface. Be readily discernable as to which was the dorsal and which was the ventral. The highest round edge or the convex side would be the sorsal, and the flat side would be the ventral. However, if an artifact was flaked exactly the same on both sides the two surfaces would not be discernable. One of the sides is irregular or both of the sides are irregular. One can check the irregular flaking which would normally be random flaking. Sometimes even with pressure flaking it is random flaked. Random flaking is used for preforms and these have no regular control. Regular flaking shows that control was used whether it was percussion or pressure. They would be classified as wide, medium, or narrow. These would be relative to the length discussed previously under flakes. Some will be parallel, some will be oblique, and some will be double oblique, that is, with both edge surfaces going through the central part of the artifact itself, slanting towards the basal portion of the artifact. Some are chipped from one edge only. By studying the flakes one can also determine the order that the flakes were removed because there is an overlapping. The size of the flake on an artifact will probably be only half the size of the flake that was actually removed, because there is the overlapping. They do have to have an overlapping if they are going to be a long flake, or even a medium flake. They must have a ridge to guide the flake across the surface of the point or the artifact itself. These ridges must be previously established. If one gets a hinge fracture it is difficult or impossible to carry a flake beyond the hinge fracture unless one goes to the other side of the artifact and meets the hinge fracture flake with another flake and removes it. There is just not the quantity of materials to stand the pressure to carry it beyond the hinge fracture. We also have the angle of the artifact and how thick it is made. Then there are the thinning techniques that show up on these that are fairly flat. From the hinge fractures you can see the mistakes that were made and sometimes how they tried to elimin the mistakes that were made and sometimes how they tried to eliminate the mistakes. Sometimes they were discarded because of hinge fractures. The ripples themselves or the ridges produced by the flakes are variable. Certain techniques will bring out a very sharp groove. Other techniques, the manner that it is held and the way the pressure is applied, will eliminate the ripples. This can be done by the overlapping, and also by following a constant ridge and then retouching after the first retouch was done. This will eliminate some of the ripple or the ridges. These are the little grooves that carry from the edge to the center or over the top of the artifact. Some artifacts will show that the flake has been purposely released at the center and picked up on the other side, leaving a slight indentation at the center of the artifact. The techniques used may be indicated by the slight bulbs of pressure or percussion. If a neat bulb is taken off near the edge when the flake is detached, it will leave a hollowed out surface that will run all the way along the edge of the artifact and will produce a much sharper working edge.

Next are the edges themselves. The edges have so much character in relation to the function of the tool. By a study of the edge one can see whether it was used as a knife or how it was broken in use, for instance, if it was a projectile point. In the grinding of the edges some were purposely made irregular and some are very regular. In the irregular ones you will find, sometimes, those that were used for the manufacturing methods indicating percussion work. Also, the bulb removal, alternating from one side to the other of the flakes, is indicated in the edge. Some of them are very straight and others have a piecrust, a sinuous effect, but are still regular. They may be sinuous, but they can still be a very regular flake and not be in the irregular classification. Some have been left razor sharp.

All of these indicate manufacturing techniques or usage. Some are dull where they have been abraded in order to produce a constant platform. Some were dulled from usage. For alternating flakes, the stone was alternated from one side or inverted in the hand. One flake was taken off on one edge, it was turned over, and a flake was taken off of the other edge. That produces the sinuous effect. Some surfaces are ground. The grinding produces an ease in detaching or removing the flake because it was like the ground glass as previously described in the removal of flakes. Polished surfaces assisted in halfting, to keep from cutting the lashings that bound the artifacts to a handle or shaft. Also polishing was used to withstand pressure, that is, it was used where a great deal of pressure was required in order to carry a very long and narrow flake entirely across the artifact. The polished has considerably more strength and will withstand the pressure without crushing. If pressure is applied to a very sharp edge it will crush and shatter it underneath and produce a sharp hinge fracture that cannot be removed without reducing the size of the artifact. Serrations are made in different manners. They can be very shallow and can be of a normal regularity and a normal depth, depending on the depth of the flake. (Don, this probably doesn't read right.) Some serrations are spaced differently for they may be very small towards the distal end of the artifact, and gradually, up towards the base of the artifact or the proximal end, they may be in a regular manner. A sharp edge of a piece of agate or flint is used just to press these in, in serrating. The type of break indicates the fine little serrations were done. Some were done just on one side. They went along with their small tool and pressed off these serrations just from one side. Others would take one side out then turn the stone over and do the same thing. The other style is alternating these. It is similar to altering for the flaking carried clear through. Some of these were serrated as the tool was retouched. That is, a long narrow flake was taken off at the same time that they were serrated. These characters seem to follow in the type of hafting, and the group of people seem to have certain ways that they did their serrations. With this number of different types of serrations I am sure they would fall in various different categories that will add character to the point itself. And this may determine the call that the artifact would fall in. With the basal aspects we have the thinning, fluting, and the hafting techniques, the grinding, the polishing and the manner that the barbs were jput on. With the hafting techniques there were several ways that the notches were produced. Some would take it from either side of the notch and then leave a platform in the center and take off one large flake in the center. This produces a distinctive edge inside of the notch itself. The others were made with just one single round concoidal flake from one side and then the other. Each time one of these is removed, the platform must be established in order to take off the other side because one has to go beyond the center of the inside of the notch for the flake to be removed on the other side. It is by removing from one side and then the other that the notch is carried on towards the center of the artifact itself. With the basal technique there would be concave, convex, straight, and recurved as well as the platform preparation for fluting. Some of these are ground, some of them are polished. All have their place in the typology of artifacts. By study of a flake assemblage from an unoccupational zone or aflint tool manufacturing site, one may classify the flakes to interpret the artifacts produced. The typology of the flakes have a direct relation to the typology of method or manufacturing, and will offer a sharper definition to the previous overlap of variations of forms and hafting techniques. When the flake form manufacturing methods are typed, one may arrive at functions with a greater degree of accuracy. Since the functions play an important part in typology, one can list the names common to all parts of the world and in certain continents. By using a common term for the main classifications, the present type of artifacts do follow definite similarity of manufacturing attributes.