

Note On Materials

The part lithic materials played in mans economey and his ability to survive
selection cannot be underestimated .
His ~~choise~~ and familiarity of certain lithic materials were first nessary
before he before he could deside and plan his menue wether it be
herbiverious or carniverous , again his wardrobe would be very inadequat
without the use of a few sharp flakes of stone. Materials with sharp
cuttings edges , wether of shell, teeth bone or stone ~~###~~ ^{marked} the defferences
between man an animal . The materials used by certain groupes of people
have as much or more diogonostic value than their shape or ~~the ###~~
function in obtaining food and clothing. This paper is intended to interpet
the use of materials in mans developement by experments and the study of
the of the qualities and individualisim of them . certain groupes had
limited to their availability
certain preferences and why they provided a certain functional need.

Any parrallisim or similarity between the modern mineralogist or
and stone age man
crystallograbher would be only a coincidence, the mineral constituents
couldent have meant less to to the stoneworker. Minerals with a sharp
durable cutting edge and ^{the proper} a response when subjected to either percussion
or pressure were its only requisites. From these materials were made
artifa cts. These artifacts developed in refinement from the lowest of
technological levels to some of the finest forms of artistry # parallelling
the developement of man into historic times. The quality of the artifacts
canot exceed the qualities of the materials used to make the tools,
regardless of the workers skill. The materials can afford the clue to
the presence of man when the material can be restricted to a single
source with definite identifying characteristics. Then by eliminating
movement by natural processes such as glaciation and transportation by
water in the form of alluvium , man must be the transporter. Lithic material
bruised and abraded
moved by natural means can be redily identified by its surface

The past stone worker has done much to assist the student of lithic material distribution,. The chain of phases in the life of certain artifacts can provide much assistance in their movements from the original sources of materials. First depending on the technique used, when making an artifact the amount of discarded flakes may and abandon may total a hundred or more to complete a single tool. Second, in order to reduce the bulk and weight only the roughing was done at the materials occurrence, this procedure also insured the quality to be of a certain standard without undue waste. Third, the artifact was again refined by percussion at the convenience of the worker ordinarily some distance from the original source of material. The artifact was then sharpened and re sharpened, possibly reformed until exhausted or broken, the broken pieces at times being reutilized for smaller artifacts. These statements should be qualified and do normally apply to only the larger artifacts as the smaller projectile points can be made directly on flakes and blades. I am only trying to point out the importance of materials as a criteria in the study of mans movements and trade routs from a known source of identifiable material when completed artifacts are lacking,. The chain of phases in the life of an artifact will vary according to the numerous cycles and behaviors of different groups of people.

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An example of material study could be the finding of a flake of obsidian in the state of Ohio. Because it ~~is~~ is a flake one may conclude that it was transported there by man. The importance is that a material was moved from its source and not that it was an artifact or a type specimen of a projectile point and its source must be from volcanic activity. One can then infer that the obsidian came either from the West or from the South, ~~is~~ The analysis of obsidians from different areas will no doubt supply future answers.

the same type

However additional finds of obsidian, flakes, when plotted will point to the source ~~if the flakes are of the same type of obsidian~~ This is purely a hypothetical example formulated from the finds made of the ceremonial from the moundbuilders. Obsidian when found in the middle United states is indeed an exotic, but other materials can be equally as unique because of certain qualities inherent to each. Good Lithic material is limited and sources of any magnitude are not numerous. Material studies on both sides of the Bering Strait could be a possible source of information. From My experiments I find each material from different localities has a character and quality pertinent to that particular Flint, Chalcedony, obsidian and ect. I may ask the question Are Lithic Materials found in Siberia and Alaska made up of the same types of silica formed under the same conditions and the same impurities.

Page 2, Second par. When one is able to controll the five dimentions
-Thickness, length, curve, width and ~~breadth~~ variations of breadth
such as the expanding and constricting of the flake at both the proximal
and distal ends,- when removing a flake , he can then produce almost
any tool he may need.

Page 3 , second par. ~~silix~~ silix in not to be confused with the trade
name of ~~U. S.~~ U. S. product. Silix is a common old world term for a
wide range of silicious rocks used in tool making.

Page 8, first par. The ~~bubbles~~ gasses that cause the bubbles to form
vesicles in the molten lava upon reaching this size will ^{generally} rise and burst
befor the molten rock will solidify.

Page 13 (1) ~~Quartzites are of two varieties , the meta quartzites and
the silicified sandstones, they are compared by my lay findings and
find recently there are geological separations~~

Initially I had in mind to place the rocks used in the ~~flaked~~ flaked
tool industries in the order of christlinaty but now find that there
should be a separation of quartzite into two geological catagories. I
had become aware of the differences in workability of two types of
quartzites as the results of experiments in flaking. They are described
and compared together and the conclusions of the experiments conform
to their geological occurance, but show the need for ~~separating~~ separating

the quartzite formed by silicification of the quartz grains into a homogeneous mass, which has grown in optical continuity around each fragment. This type of quartzite will be classified under silicified sediments. The Metamorphosed type of quartzite will be ~~under~~ meta-quartzite and be placed with metamorphosed rock.

Sand stones, conglomerates and breccias will also be placed under Silicified sediments.