

motion of the system," said Dr. Miller, "are all in the same general direction and lie within a circle having a radius of 26 degrees. The assumed velocity of a hundred and thirty miles per second is about seven times the velocity of the earth in its orbit, and it is of a reasonable magnitude."

BLUE AND RED FLOWERS COLORED WITH SAME DYE

It makes no difference whether a flower is red or blue, its hue is due to the same fundamental substance. Its redness or blueness depends on the chemical nature of the plant sap. For example, deep red dahlias and blue cornflowers contain the same pigment but the sap of the dahlias is acid and that of the cornflowers is alkaline; and this makes all the difference. Intermediate shades depend on the degrees of acidity or alkalinity.

The name of this versatile plant pigment or dye is "anthocyanin", according to Prof. R. Robinson, well-known English physiological chemist, who told of investigations in this branch of plant physiology before the Royal Institution of Great Britain. This strange-looking word is made up of two simple Greek roots, which translate into "flower-blue", which is exactly descriptive of one of its phases.

There are really many distinct anthocyanins, Prof. Robinson explained, though chemically they are practically identical. By analysis they can all be shown to be derived from three fundamental substances, which are closely related to each other.

There appears also to be a fourth member of this group of basic flower dye-stuffs, which has long been exploited by tropical Indian tribes as material for rouge, which, however, is used among them by gentlemen only.

"The Indians of South America in the vicinity of the Orinoco prepare a red plant pigment called 'carajura' or 'chica'," Prof. Robinson told his hearers. It is so valuable a commodity that it is said of a poorer native, 'he can only paint half of his face!' The chemical examination of carajura by Prof. A. G. Perkin, has resulted in the isolation of a red crystalline constituent called carajurin. The molecules of the salts of carajurin with acids have been proved to contain the characteristic nucleus of the anthocyanidins and apparently carajura proclaims a fourth anthocyanidin. It is unique both as a cosmetic and as an object of scientific research."

ANCIENT BEAR BONE FETISH GAVE MAN ARTISTIC URGE

By George Grant MacCurdy
Professor of Anthropology, Yale University

Discovery of a 100,000 year old lower jaw bone of a cave bear just made by Emil Baechler of St. Gallen throws new light on how man first came to be an artist.

This ancient relic unearthed by Dr. Baechler in the floor debris of a cavern at Wildenmannlisloch, a mile above sea level in the canton of St. Gallen, Switzer-