AN EXPEDITION TO COLLECT FOR GEOLOGY EXHIBITS

An expedition to various localities in Wyoming, Colorado, and South Dakota, and also in various eastern states, to collect specimens relating to structural and dynamic geology, was dispatched by Field Museum on August 16. Mr. Sharat K. Roy, Curator of Geology, is conducting the expedition, and will probably remain in the field for about ten weeks.

The expedition is to continue field work which Mr. Roy performed in 1937 and 1938. It is expected that this season's work will furnish the specimens required to fill gaps now existing in the exhibits in Clarence Buckingham Hall (Hall 35—Physical Geology and Lithology). The collecting of specimens to demonstrate scientific facts in physical geology is a difficult task in the sense that the subject includes so many varying phases that the collector must go to a great many places to obtain suitable specimens for a comprehensive exhibit. A great deal of time is required in the collecting because the specimens almost always have to be chiseled out from solid rocks, and sometimes must be blasted out.

During part of his work in the east, Mr. Roy will be joined by Mr. Henry Herpers, Assistant Curator of Geology.

THINGS YOU MAY HAVE MISSED

Whistling Arrows That Functioned Like Today's Screaming Bombs

Analogies between ancient and modern ways of doing things, often merely fortuitous, are somehow interesting beyond the point of sober fact. An antecedent of the modern "screaming bomb" is a case in point. Today in Europe the deadly aerial bomb is "perfected" by adding an air-resisting device which makes the bomb scream like a police siren as it hurtles to earth. Yesterday in China the heads of arrows were fitted with air chambers to make them roar in flight. Terror is the motive in both cases: a whistle added to a commonplace (!) projectile makes it seem more dangerous. There the analogy stops. The Chinese whistling arrows exhibited in Hall 32, Case 25, were used by Manchu bodyguards to frighten people off the streets when the emperor rode by. They were not dangerous because the head was large and blunt and because their speed was reduced by the air resistance which made them whistle. The modern screaming bomb on the contrary, is no less deadly because it whistles, and it is supposed to be more efficient than an ordinary bomb in that it may destroy the morale even of people lucky enough to escape its explosion.

Whistling arrows have a long history and wide diffusion in Asia, and were known also in Europe at a time when most people who shot did so in sport. There are two principal types. One has a sharp metal point—shaped so that it will buzz, or with a small whistle attached. This kind was made to kill, and the whistle is only an adjunct. In the other type, with its big whistling point, everything is sacrificed to noise, so the arrow is harmless. These were often used to scare up game for hunting parties.

The earliest reference to whistling arrows is probably in a Chinese history written about 100 B.C., which credits them to the Hsiung-nu of Mongolia. The historian relates that about a century before, Maotun, a young Hsiung-nu prince, used a whistling

Ancient Terror Weapon

Just as screaming bombs released from airplanes are used in the war of today to destroy enemy morale, the ancient Chinese used whistling arrows. One, from the Museum collections, is shown here by Mr. C. Martin Wilbur, Curator of Chinese Archaeology and Ethnology. The blunt head of the arrow is pierced by holes through which the rushing air produces a shrieking sound when the arrow is projected into flight by the bow.

arrow to train his followers in absolute loyalty. He instructed that whenever he shot his whistling arrow at something his attendants were to shoot to kill. First he tested them by shooting at his favorite horse. Those who hesitated were executed. Then he sent the sounding arrow at his concubine, and again killed those who feared to shoot her. Next he shot at the horse of his father, the Hsiung-nu ruler. His whole troop instantly shot and killed the horse. Knowing then that he could rely on his followers to obey unhesitatingly, Maotun finally shot the whistling arrow at his father, who was thereupon instantly killed by the archers. Then Maotun seized control and welded the Hsiung-nu into a powerful confederacy that challenged China's power for several centuries.—C. M. W.

An enormous single crystal of beryl, weighing about 1,000 pounds, forms a unique exhibit in Stanley Field Hall of the Museum.

OLD WORLD FLORAL IMMIGRANTS ARE FOUND IN CHICAGO

By JULIAN A. STEYERMARK
ASSISTANT CURATOR OF THE HERBARIUM

It is interesting now and then to take stock of those wild flowers which grow in our large cities on vacant lots, lawns, and railroad right-of-ways. Many of them are found to be immigrants from Europe, Asia, or sometimes, even Africa.

One of such European plants is the curly-leaved muckweed (*Potamogeton crispus*), which forms dense masses under water in the lake at Stony Island in Chicago. This pondweed is rare and has been found at only a few localities in this country.

Another worth watching for is the resupinate or reversed clover (*Trifolium resupinatum*). This is a relative of our common white clover (which, by the way, is also an introduced plant from the Old World), and has been brought into the United States accidentally from Europe with grass seed. It is a pretty little clover with pink flowers. Instead of the arrangement, usual in clovers, of the largest petal (called the standard) being in the upper half of the flower, the reversed clover has its largest petal in the lower half of the flower, and this characteristic is responsible for its name. Although it has been found growing on several lawns in Chicago, it thus far is quite rare in the United States.

The last immigrant to be mentioned is one recently discovered by Dr. George M. Fuller, distinguished botanist of the University of Chicago. It is *Mazus japonicus*, a pretty little lilac- and yellow-flowered member of the figwort family. A native of Japan, China, and the Indo-Malayan region, only recently has it become introduced in the United States where it has been found in a few cities—Philadelphia, Washington, Baton Rouge, St. Louis, and Portland, Oregon. Dr. Fuller's plant (sent to the Department of Botany for identification) was found on a lawn in Chicago, and represents the first station known from this area and from Illinois.
