



GLIMPSE AT ANCIENT HIGHWAY CONSTRUCTION

curbs 18 inches high on both sides, beyond which were 8-foot side roads. The Appian Way was of solid stone and concrete masonry 3 to 4½ feet thick, depending upon the soil on which it was laid. It was very straight, with steep grades and the curves widened as on modern roads.

In building the Appian Way, a bed of sand and gravel sometimes covered with a thin coat of lime mortar was used as a foundation for the four layers of masonry. The first masonry layer, from 10 inches to 2 feet thick, was composed of stones that would fit in a man's hand held together with lime mortar or clay. The second layer of smaller stones mixed with lime mortar was 9 inches thick. The third layer was of concrete made of small stones, sand and hot lime mortar 1½ feet thick in the center and a foot thick on the sides to give a crown to the road. The fourth or wearing layer was of polygonal stones about 3 feet in diameter and 6 inches thick laid with close joints. The upper surface of the wearing stones was dressed smooth and the joints fitted so tight as to be scarcely discernible.

These features of construction may be readily distinguished in the photograph. A detailed description of the model is available at the U. S. Bureau of Public Roads, Washington.

Science News Letter, February 10, 1934

ORNITHOLOGY

Eskimo Arrowhead Found In Duck Killed in California

THE HARDINESS of the mallard duck was dramatically demonstrated in a bird shot down over a lake near Bakersfield, Calif., recently. Postmortem examination of the duck resulted in the discovery of a 9½-inch triangular bone arrow head of the type used by the St. Lawrence Island Eskimo firmly imbedded in its breast.

The mallard was shot by a friend of L. C. Barnard of Los Angeles. Its projectile was declared by the Los Angeles Museum to be of undoubted Eskimo origin.

The arrowhead was triangular in cross section, was unbarbed and was fashioned of mammal bone, probably the leg bone of a caribou from the mainland. In type, the missile point checked closely with the bone and ivory arrowheads used by the natives of St. Lawrence Island in the Bering Strait off Alaska. The sinew wrappings on the head had been softened by the blood, and the wooden shaft had long since dropped free.

When discovered, the butt end of

the blade projected some two and a half inches from the breast of the duck. Judging from the position in which the arrowhead lay, the Eskimo hunter had released his shaft from the rear of the bird just as it cleared the water.

This is not the first instance of such projectile points being discovered in birds flying south from the Arctic. A few years ago a farmer in Nebraska reported the discovery of an ivory arrow point, likewise of Eskimo origin, imbedded in the flesh of a goose he had shot. Another report was made of the discovery of a barbed bone arrow head of Eskimo type found in the open in New Mexico. Perhaps some of the scattered instances of discoveries of similar artifacts of alien manufacture found thousands of miles from their original source may well be attributed to some such accident.

It does not take long for a protecting sheath of gristle-like material to form around alien objects in a bird's body, and once healed, the creature might live indefinitely.

Science News Letter, February 10, 1934