

Article XIV.—NOTE ON A CALCITE GROUP FROM
BISBEE, ARIZONA.

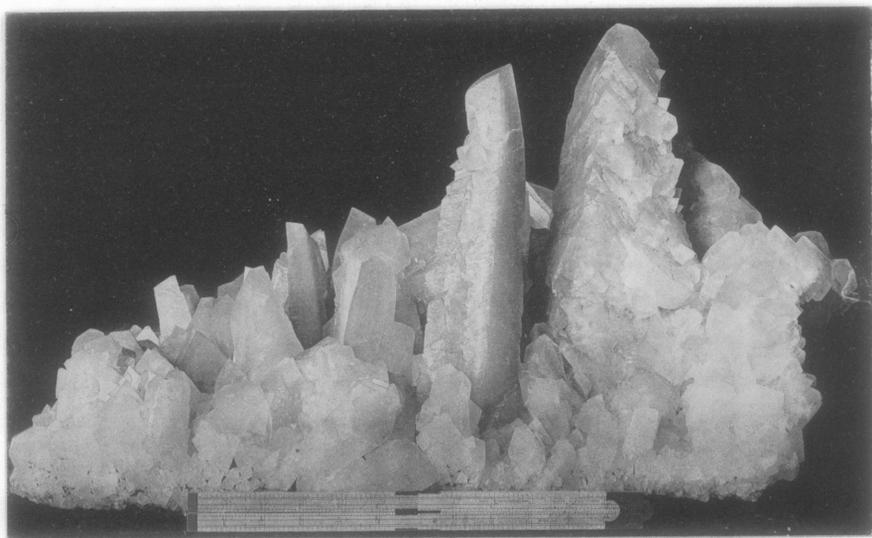
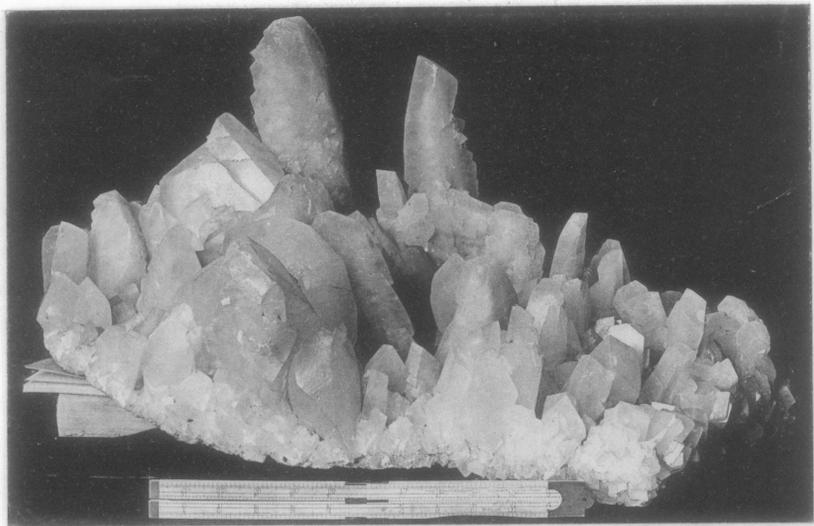
By E. O. HOVEY.

PLATE VIII.

Among the many handsome specimens received by the American Museum of Natural History from the mines of the Copper Queen Consolidated Mining Co., at Bisbee, Arizona, one of the most peculiar is the group of calcite crystals, two views of which are given on the plate accompanying this note. The planes represented on the crystals are few in number and the combinations are simple enough, but the result is an uncommon one and is of such a character that it seems to be worth while to make a record of it.

The planes present are the base c (0001 , O), the rhombohedron M ($40\bar{4}1$, $+4R$), and the rhombohedron f ($02\bar{2}1$, $-2R$). The planes M and c are present on only a few of the crystals, f being the predominant form. M is highly polished, c is less brilliant, while f is dull or etched and is usually curved or otherwise distorted. The small crystals in the group show a comparatively uniform development of the planes composing them, but the larger ones are strongly prismatic or columnar in two ways. One set, and that much the most numerous, is made up of single crystals elongated on the rhombohedral axis of the form f , forming a prism the acute angle of which varies from 76° to 80° , as measured by a contact goniometer, the calculated value being $78^\circ 51'$ (Dana). This is the simplest form, since it shows but the one rhombohedron f . The other set is composed of combinations of crystals showing the same rhombohedron built up on the vertical axis and terminated at the top by a small basal plane. The prisms of this set are much stouter in form than those of the other, but they are much less numerous. The best developed column is the larger of the two prominent ones shown in the figures on the plate and is of this set, the smaller of these belonging to the first set. A few large crystals made up of the rhombohedron f in normal development show the basal plane c and the rhombohedron M .

At several places the crystals are grouped with their basal planes nearly at right angles to one another, but their cleavage planes are not coincident and therefore such groups cannot be regarded as twins according to the third law (twinning plane the unit rhombohedron). Around the bases of the large crystals and the columns there are numerous small crystals composed of the rhombohedron *f* and the base, and the under surface of the specimen, as shown on the plate, is coated with such crystals. It is evident that the specimen was attached to its surroundings by the edge. In size the group is about 62 cm. (2 feet) long, 41 cm. (16 inches) wide, and 8 cm. (13 inches) high.



CALCITE GROUP, *Bisbee, Ariz.*

Opposite views.

