halides of the CsCl type of space lattice (and *vice versa*). He found also that any halide controls the crystallization of any other halide of the same type of space lattice only in case and in proportion as the space lattices concerned are (nearly) the same in dimensions. Since the dimensions of the space lattices depend upon the dimensions of the atoms, this conclusion can be stated in the form: any halide controls the crystallization of any other (of the same crystal type) only in case and in proportion as the atoms concerned are (nearly) the same in dimensions. The writer believes that the same law applies to isomorphous mix-crystals.

Attention is again called to the annual meeting of the Society to be held Dec. 27–29, 1928, in New York City. The December issue will contain a preliminary list of titles of papers to be presented before the Society at this meeting. Titles of papers should be sent to the Secretary *at once* to insure their appearance in the December number.

NEW MINERAL NAMES

Classification of the Calcite Group

G. Bilibine: On the isomorphous mixtures of the calcite group. *Mem. Soc Russ. Mineral.*, 2nd series, **56**, 3–36, 1927. (Russian with French summary). The isomorphous mixtures are classified as follows:

Binary mixtures:

Pistomesite	(Mg, Fe) CO_3
Oligonite	(Fe, Mn) CO_3
Roepperite	(Ca, Mn) CO_3
Dolomite	Ca, Mg $(CO_3)_2$
Monheimite	(Zn, Fe) CO_3
Baritocalcite	Ca, Ba $(CO_3)_2$

Ternary mixtures

Ankerite	Ca (Mg, Fe) $(CO_3)_2$
Cobaltsmithsonite	(Zn, Co, Mg) CO_3

Quaternary mixtures

Kutnohorrite	(Ca, Mg, Fe, Mn) CO_3

The limiting values as Bilibine would give them are: For binary mixtures not less than 25 per cent of the second constituent; for ternary mixtures not less than 17 per cent of the third constituent.

W. F. F.

Alumohydrocalcite

G. Bilibine: Alumohydrocalcite, a new species. *Mem. Soc. Russe Mineral.*, **55**, 243-258.

Name: From the chemical composition of the mineral, a hydrated carbonate of lime and alumina.

Chemical Properties: A hydrous carbonate of lime and alumina. $CaO.Al_2O_3.2CO_2.5H_2O$. Analysis: SiO_2 0.67, TiO_2 none, Al_2O_3 28.60, Fe_2O_3 0.45, FeO 0.35, MnO none, CaO 15.46, MgO tr., K_2O tr., Na_2O tr., P_2O_5 0.74, CO_2 25.20, H_2O- 26.40, H_2O+ 2.48. Total 100.35. Easily soluble in acids with effervescence, par-

tially soluble in alkalies with the separation of $CaCO_3$. Boiled with water separates $CaCO_3$ and $Al(OH)_3$. Infusible before the blow pipe.

CRYSTALLOGRAPHIC PROPERTIES: Monoclinic. Forms (100) and (010). Cleavage perfect parallel to (100), less so parallel to (010).

PHYSICAL AND OPTICAL PROPERTIES: Color, chalky white to pale blue, rarely violet, gray or light yellow. Biaxial with 2V (calculated) 50°-55°. $\alpha=1.485$. $\beta=1.553$, $\gamma=1.570$. Bx_a normal to (010). Extinction 7°-10°.

OCCURRENCE: Found in the Khakassky District, Russia, associated with allophane, volborthite, copper carbonates, cuprite, native copper, limonite, calcite and wad, as radiated spherulitic groups or small needle shaped crystals.

DISCUSSION: Belongs to the dawsonite group of minerals. Formed by the action of calcium carbonate solutions on the allophane.

W. F. F.

Hydrothorite

EDWARD S. SIMPSON: Contributions to the Mineralogy of Western Australia. (1) Hydrothorite (Sp. Nov.) Wodgina, N. W. Div. *Jour. Roy. Soc. W. Australia*, **13**, 37-9.

NAME: From its composition, a hydrated thorium silicate.

CHEMICAL PROPERTIES: A hydrous silicate of thorium, $ThSiO_4.4H_2O$. Analysis: (containing a small quantity of a carbonate, phosphate and probably a second silicate): SiO_2 15.77, ThO_2 57.79, Ce_2O_3 0.24, Y_2O_3 0.73, UO_2 none, UO_3 2.98, Fe_2O_3 none, Mn_2O_3 tr., Al_2O_3 0.88, PbO 1.25, CaO 1.65, MgO 0.60, K_2O none, Na_2O none, H_2O 15.18, CO_2 1.50, P_2O_5 1.33. Total 99.90. Attacked by warm moderately concentrated acids with the separation of silica.

PHYSICAL AND OPTICAL PROPERTIES: Color pale pinkish buff to cartridge buff (Ridgeway) when dry, pale orange yellow when wet. Opaque. Transparent under the microscope. Isotropic. $n=1.638$. Strongly radio-active. H= 1-2. Falls into small flakes in water.

OCCURRENCE: Found in the tantalite bearing pegmatite at Wodgina, associated with mackintoshite, thorogummite, pilbarite, albite, quartz, spessartite, manganotantalite and weathered lithiophilite. It is an alteration product of mackintoshite.

W. F. F.

Codazzite

RICARDO LLERO CODAZZI: Los Minerales de Colombia. *Biblioteca de Museo Nacional Bogota*, p. 94, **1927**.

NAME: In honor of the geographer: Augstin *Codazzi*.

CHEMICAL PROPERTIES: Carbonate of calcium, magnesium, iron and cerium. (Ca, Mg, Fe, Ce) CO_3.

CRYSTALLOGRAPHIC PROPERTIES: Rhombohedral with an angle of about 74°.

PHYSICAL AND OPTICAL PROPERTIES: Color ashy-brown. Luster sub-vitreous. Sp. Gr. 2.5. H= 4.

OCCURRENCE: Abundant in the emerald mines of Muzo, Coscuez and Coper, Colombia.

DISCUSSION: (A private communication by the author attributes the cerium content to included parisite. Abstr.).

W. F. F