

## (6) SHIPS' LOADSTONES

By Mr. C. E. N. Bromhead

By the year 1200 the magnetic compass was familiar over much of Europe. Artificial magnets began to be made commercially in 1750. Between these dates loadstone, as such, was a valuable economic mineral, used to make or to re-magnetize all compass-needles. It soon became usual to mount a piece of the mineral with irons held against its poles, forming "ships' loadstones," examples of which are exhibited. The paper gives a general history of the subject, with references, etc.

(Titles and abstracts kindly submitted by G. F. CLARINGBULL, *General Secretary*.)

## NEW MINERAL NAMES

## Sanmartinite

VICTORIO ANGELELLI AND SAMUEL G. GORDON, Sanmartinite, a new zinc tungstate from Argentina. *Notulae Naturae Acad. Natural Sci. Philadelphia*, No. 205, 7 pp. (1948).

CHEMICAL COMPOSITION: The zinc analogue of wolframite, but the analyses and low G. indicate that about one-sixth of the W positions in the lattice are vacant, i.e.,  $RW_{0.83}O_{3.5}$ , with R = Zn, Fe, Mn, Ca. Analysis by Horace Hallowell gave  $WO_3$  72.62, ZnO 18.18, FeO 7.24, MnO 1.73, CaO 1.48, Insol. 0.24; sum 101.25%. Two other preliminary analyses are given.

CRYSTALLOGRAPHY: The minute crystals (of the order of  $60\mu$ ) are monoclinic, tabular parallel to {100}. The forms noted were {100}, {010}, {110}, {112}, and {102}. Goniometric data gave  $a:b:c=0.8255:1:0.8664$ , beta  $90^\circ 28'$ ;  $p_0$  1.0495,  $q_0$  0.8664.  $\mu$   $89^\circ 32'$ .

From x-ray powder data  $a_0$  4.712,  $b_0$  5.738,  $c_0$  4.958 (not stated whether Å or kX units),  $a_0:b_0:c_0=0.8212:1:0.8641$ . X-ray powder data and photographs are given; they closely resemble those of wolframite.

PHYSICAL PROPERTIES: Masses are dark brown to brownish black in color, but microscopic crystals are reddish-brown with red reflections, and are more or less translucent. They resemble dark sphalerite. Luster resinous. Sp. gr. (determined by Judith Weiss) 6.697.

OCCURRENCE: From a small, abandoned, prospect in Los Cerillos, 7 km. southwest of San Martin, Department of San Martin, Province of San Luis. Also reported to occur at other nearby localities. Occurs in a quartz vein 50–60 cm. wide that is intercalated between a light-colored granite and a pink pegmatite. Sanmartinite is associated with scheelite, which it appears to replace, quartz, tourmaline, and willemite.

NAME: For the region, which, in turn, is named for the liberator of Argentina, José de San Martín.

MICHAEL FLEISCHER

## Wurtzite—4H, Wurtzite—6H, Wurtzite—15R

CLIFFORD FRONDEL AND CHARLES PALACHE, Three new polymorphs of zinc sulfide. *Science*, 107, 602 (1948).

Three new polymorphs of ZnS were found in shrinkage cracks in clay ironstone concretions embedded in carbonaceous black shale of the lower Conemaugh formation at numerous localities in western Pennsylvania and eastern Ohio. These are named in the notation suggested by Ramsdell, *Am. Mineral.* 32, 63 (1947) for silicon carbide, where the number refers to the formula weights per unit cell, and H and R refer to hexagonal and rhombohedral forms. In this notation, wurtzite—2H is ordinary wurtzite.

	$A_0(\text{\AA})$	$C_0(\text{\AA})$	Cell contents	Space group
Wurtzite—2H	3.811	6.234	$\text{Zn}_2\text{S}_2$	$C6mc$
Wurtzite—4H	3.806	12.44	$\text{Zn}_4\text{S}_4$	$C6mc$
Wurtzite—6H	3.813	18.69	$\text{Zn}_6\text{S}_6$	$C6mc$
Wurtzite—15R	3.822	46.79	$\text{Zn}_{15}\text{S}_{15}$	$R3m$

M.F.

## DISCREDITED MINERALS

## Seelandite (=Epsomite)

HEINZ MEIXNER, Was ist Seelandit? *Ann. Naturhist. Museums Wien* **50**, 690–693 (1939).

Seelandite was described in 1891 as a hydrated magnesium aluminum sulfate containing 4.1% MgO and 10.5%  $\text{Al}_2\text{O}_3$ . It has been doubtfully grouped with pickeringite. Examination of material believed to be from the type locality shows it to be epsomite. It is thought that aluminum was reported erroneously because of failure to add  $\text{NH}_4\text{Cl}$  before precipitating with ammonia, thus causing precipitation of magnesium, reported as aluminum.

M.F.

Ralph E. Grim, petrographer of the Illinois State Geological Survey and authority in the field of clay minerals, has been appointed research professor of geology at the University of Illinois. He will teach graduate courses while carrying on his regular work with the Survey.

Included in the project grants from the Penrose Fund of The Geological Society of America, the following are of special interest to the mineralogist: Bronson Stringham, University of Utah, alteration studies of the copper ore body at Bingham, Utah; Thomas F. Bates, Pennsylvania State College, electron microscope study of the mineralogy and petrology of the clay minerals.