NEW MINERAL NAMES

Billietite

J. F. VAES, Six nouveaux mineraux d'urane provenant de Shinkolobwe (Katanga). *Bull. Soc. Belge Geol.*, **70**, B 212–225 (1947).

R. VAN TASSEL. Analyse spectrale de la billietite. *Ibid.*, p. 226 (1947).

This mineral occurs as small (up to 2 mm.) tabular, amber-yellow crystals, resembling becquerelite. Orthorhombic, pseudo-hexagonal; most crystals are twinned on (111), one crystal was twinned on (101). Forms observed: (110), (011), (101), (111). Cleavage, (010) perfect. Optically negative, $n\mathrm{X}=b$, about the same as n of old methylene iodide (1.74?), $n\mathrm{Y}=c$, a little less than that of becquerelite, $n\mathrm{Z}=a$, a little less than that of becquerelite, $2\mathrm{V}=36°$. Pleochroism strong, nX nearly colorless, nY greenish yellow, nZ amber brown, dispersion strong $r>v$. Qualitative chemical tests showed the presence of Ba, U, and H_2O; this was confirmed by spectrographic tests which also showed a little lead to be present. Easily loses water when heated. Named for Valère Louis Billiet, 1903–1945, Belgian mineralogist.

MICHAEL FLEISCHER

Vandendriesscheite

J. F. VAES, *op. cit.*

Small, amber-orange, pseudo-hexagonal barrel-shaped crystals, up to $1\frac{1}{2}$ mm. Orthorhombic, forms: (010), (110), (111), (100); cleavage (010) perfect. Optically biaxial, negative, $n\mathrm{X}=b$, not measured, $n\mathrm{Y}=a$, and $n\mathrm{Z}=c$, both above 1.884, but lower than nZ of fourmarierite; 2V large. Pleochroism, nX nearly colorless, nY and nZ yellow-orange, dispersion strong $r>v$. Microchemical tests were positive only for Pb, U, and H_2O. Easily loses water when heated. Occurs at only one place in the Shinkolobwe deposits, associated with fourmarierite and diderichite. Named for Adrien Vandendriessche, 1914–1940, Belgian mineralogist.

M.F.

Masuyite

J. F. VAES, *op. cit.*

Small (0.1 mm.), pseudo-hexagonal, orange-red scales. Orthorhombic, forms: (010), (101), ($\bar{1}$01), (100), and ($\bar{1}$00), with (110) and (111) doubtful. Cleavage (010) perfect. Commonly twinned on (101). Optically biaxial negative, 2V large, nX not observed, $n\mathrm{Y}=a$ and $n\mathrm{Z}=c$ both above nY of curite and below nZ of curite. Microchemical tests were positive for Pb and U; the mineral "is probably hydrated." Occurs in small geodes in pitchblende, Named for Gustave Masuy, died in 1945, who had studied minerals of Belgian Congo.

M.F.

Richetite

J. F. VAES, *op. cit.*

Small (0.1 mm.), black pseudo-hexagonal plates. Monoclinic, extinction on (010) about 6°, commonly twinned; cleavage (010) perfect, another cleavage perpendicular to (010). Optically biaxial, negative, 2V large; $n\mathrm{X}=b$, not measured, nY and nZ are between 2.00 and 2.07. Microchemical tests were positive for Pb and U; H_2O was not tested for because of lack of material. Occurs on needles of uranophane. Named for Emile Richet, died in 1939, formerly Chief Geologist, Union Miniere du Haut-Katanga.

M.F.

Studtite

J. F. VAES, *op. cit.*

Clear yellow fibrous crystals, several mm. in length and 7–8 microns in width. The fibers are flexible. Orthorhombic. Optically negative, 2V large, nX 1.545, nY 1.555, nZ 1.68 (parallel to length of fibers). Microchemical tests showed U, a little Pb, water, and carbonate (effervescence with HCl). Occurs with "urophane" (uranophane?) and rutherfordine. Named for F. E. Studt, geologist, who published a geological map of Katanga in 1913.

M.F.

Diderichite

J. F. VAES, *op. cit.*

Yellow-green fibrous crusts. Orthorhombic. Optically biaxial, positive, 2V large, nX above 1.722, below 1.728, nY$\pm$1.728, nZ above 1.728, below 1.74. Microchemical tests showed U, a little water, and carbonate (effervescence with HCl). Named for Norbert Diderich, mining engineer, one of the first to study the Katanga deposits.

DISCUSSION: It is to be regretted that new names were given to these very poorly characterized minerals. The secondary uranium minerals need badly to be re-studied, a very difficult undertaking because of the difficulty of getting enough pure material. Nevertheless, it would be better to hold up publication of descriptions like these until enough data at least were obtained so that future workers could recognize the minerals from the descriptions.

M.F.

Anthoinite

N. VARLAMOFF, Anthoinite, nouveau tungstate hydrate d'alumine. *Bull. Soc. Geol. Belgique*, **70,** B153-B166 (1947).

CHEMICAL PROPERTIES: A hydrate aluminum tungstate, $Al_2O_3 \cdot 2WO_3 \cdot 3H_2O$. Seven analyses (5 complete) gave WO_3 72.50–74.5, Al_2O_3 15.74–17.20, Fe_2O_3 traces to 0.78, H_2O+ 8.70–9.20, with a little SiO_2 and CaO in some analyses. Very slowly attacked by HCl and HNO_3, easily dissolved by strong KOH solution even after it has been heated. Slowly dissolved by ammonium hydroxide; more readily dissolved after it has been heated to 750°.

PHYSICAL PROPERTIES: White, chalky, adheres to the tongue. Usually massive, but also as indistinct crystals (perhaps pseudomorphs). Hardness 1, sp. gr. about 4.6. Microcrystalline and apparently isotropic.

OCCURRENCE: Occurs in placer concentrates containing cassiterite and wolframite at Mt. Misobo, Kalima mining district, Maniema, Belgian Congo, also associated with ferberite in quartz veins that cut black shales. The ferberite appears to be replacing anthoinite. Also found at Ruanda, Kifuruwe region.

NAME: For Raymond Anthoine, mining engineer.

MICHAEL FLEISCHER

Schuilingite

J. F. VAES, Description d'un nouveau mineral "La Schuilingite." *Bull. Soc. Geol. Belgique*, **90,** B233-B236 (1947).

Azure-blue needles (0.1–0.15 mm. by 0.03–0.05 mm.) form crusts in crevices of an altered rock. The mineral dissolves with effervescence in HCl and the solution gave tests for Cu and Pb. It is biaxial, negative, indices of refraction above 1.74, lower than 1.93, 2V about 60°, pleochroism weak, nX=a, nY=c, nZ=b. Probably orthorhombic, cleavage

(110) perfect, (100) poor. The locality is not given, but presumably is Belgian Congo. Named for H. J. Schuiling, chief geologist of Union Miniere du Haut-Kantanga.

DISCUSSION: This seems to differ from any described mineral, but such meager data do not warrant naming it.

M.F.

Selenio-vaesite, Selenio-siegenite

J. F. VAES, Quelques sulfures de Shinkolobwe. *Bull. Soc. Geol. Belgique*, **70**, B227-B232 (1947).

Eight analyses of vaesite, $(Ni_1Co)S_2$, are given; six of these contain selenium (10.10–19.70% Se). Three analyses of siegenite are given; one shows 11.65% Se, also 3.80% Te. The names selenio-vaesite and selenio-siegenite are given to these varieties.

DISCUSSION: These varieties with S:Se about 4:1 should have been described as selenian varieties and these unnecessary names should be abandoned.

M.F.

Paraschoepite

ALFRED SCHOEP AND SADI STRADIOT, *Am. Mineral.*, **32**, 344–350 (1947).

Epiianthinite

ALFRED SCHOEP AND SADI STRADIOT, *Am. Mineral.*, **32**, 344–350 (1947).

Fairchildite

CHARLES MILTON AND J. M. AXELROD, *Am. Mineral.*, **32**, 607–624 (1947).

Buetschliite

CHARLES MILTON AND J. M. AXELROD, *Am. Mineral.*, **32**, 607–624 (1947).

Groutite

J. W. GRUNER, *Am. Mineral.*, **32**, 654–659 (1947).

DISCREDITED MINERALS

Boksputite (=Bismutite+Massicot)

E. W. HEINRICH, *Am. Mineral.*, **32**, 365–366 (1947).

M.F.