REFERENCES

BANDY (M. C.), 1938. *Amer. Min.* **23**, 669–760 [M.A. **7**–223].
CESBRON (F.), 1964. *Bull. Soc. franç. Min. Crist.* **87**, 125–43 [M.A. **17**–180].
SAKURAI (K.), KATO (A.), FUJIYAMA (I.), and IMAYOSHI (T.), 1958. *Journ. Min. Soc. Japan*, **3**, 772–7 [M.A. **14**–341].
UNGEMACH (H.), 1935. *Bull. Soc. franç. Min.* **58**, 97–221 [M.A. **6**–149].

[*Manuscript received 17 November 1969*]

MINERALOGICAL MAGAZINE, DECEMBER 1970, VOL. 37, NO. 292

Jarosite from the Eocene of the Hampshire Basin

FOUR concentrates of jarosite, $KFe_3^{3+}(OH)_6(SO_4)_2$, have been prepared as a by-product of a micropalaeontological investigation. Two are from the Barton clay at Alum Bay and the other two are from Whitecliff Bay, Isle of Wight, one in the Barton clay and one in the upper Bracklesham beds.

The jarosite was identified by X-ray diffraction, the *d*-spacings agreeing very closely with those observed by Warshaw (1956). Partial chemical analyses by wet methods confirmed the identification and an X-ray spectrometer scan identified small amounts of Pb, Sr, Ni, Ti, and Ca, which may be substituting in the jarosite. Silver was not detected.

The mineral occurs as a yellow, finely crystalline coating on quartz grains and is closely associated with limonite. In the Bracklesham specimen the jarosite forms a gradation from the limonitic staining of a sandstone band within the clays. Also frequently present are glauconite and gypsum, this association according with the record of Briggs (1951). Sass *et al.* (1965) and Pough (1941) reported jarosite associated with gypsum and pyrite. These authors suggest that jarosite results from a series of reactions initiated by the oxidation of pyrite, as either a weathering or early diagenetic feature. In the Eocene samples, jarosite appears to be a product of the alteration of limonite, which may result from the initial weathering of pyrite.

Acknowledgements. The authors would like to thank Dr. B. E. Leake and Mr. R. Bradshaw for their help and advice.

Department of Geology
Bristol University, Bristol 8

C. A. WRIGHT
J. R. WILSON

REFERENCES

BRIGGS (L. I.), 1951. *Amer. Min.* **36**, 902.
POUGH (F. H.), 1941. Ibid. **26**, 562.
SASS (E.), NATHAN (Y.), and NISSENBAUM (A.), 1965. *Min. Mag.* **35**, 84.
WARSHAW (C. M.), 1956. *Amer. Min.* **41**, 288.

[*Manuscript received 5 December 1969*]