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A VIEW OF THE PROGRESS OF DISCOVERY

IN NATURAL PHILOSOPHY, CHEMISTRY, MINERALOGY, GEOLOGY, BOTANY,
ZOOLOGY, COMPARATIVE ANATOMY, PRACTICAL MECHANICS, GEOGRAPHY,
NAVIGATION, STATISTICS, ANTIQUITIES, AND THE FINE AND USEFUL ARTS.

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ART. XXXII.—On *Berthierite*, a New Mineral Species. By WILLIAM HAIDINGER, Esq. F.R.S.E., &c. Communicated by the Author.

THE species to which the present communication refers is one of the numerous results of Professor Berthier's indefatigable exertions to increase our knowledge of mineral productions. No scientific account of it having yet reached this city, I must content myself with giving here what can be extracted from *Le Globe* newspaper of the 30th June 1827, relative to a meeting of the Institute, held on the 25th of the same month. In that meeting M. Berthier gave an account of the new species, and did me the honour of proposing for it the name of Haidingerite, not aware of the same name having been previously applied by Dr Turner* to the diatomous gypsum-haloïde, a species which I had described some time ago, and which Dr Turner had analyzed,† and found to be an arseniate of lime combined with less water than in the pharmacolite. In order to avoid the double employment of one name, I take the liberty of proposing a new name for the new substance. From my coming thus forward, I trust M. Berthier will perceive my desire of having my name linked with the literary history of the species in question; while the mineralogical public will no doubt approve of my proposing the name of Berthierite, which happens to be unoccupied, and which is peculiarly appropriate to the species in question; much more so than most of our mineralogical names, as the species was not only discovered and analyzed by M. Berthier himself, but, by the particular process which he devised, rendered useful to the arts.

The Berthierite is an ore of antimony in the economical acceptance of the word; as it consists of four atoms of sulphuret of antimony, and of three atoms of protosulphuret of iron, the antimony being combined with twice as much sulphur as the iron. It occurs at Chazelles, in Auvergne, in a vein which promises to be very productive. It had been worked for

* *Edin. Journ. of Science*, April 1827. † *Id.* October 1825.

some time, but was again abandoned on account of the bad quality of the antimony extracted. M. Berthier has imagined the following process, by which the metal obtained becomes perfectly pure. The mineral, without previous roasting, is to be melted with about one-third, or a little less, of its weight of metallic iron, to which is added a small quantity of sulphate of soda mixed with charcoal.

In regard to its external appearance, Berthierite much resembles some of the other species of the genus antimony-glance, as the common grey antimony, and the Jamesonite, and also the zinkenite. It occurs in elongated imbedded prisms, with a single pretty distinct longitudinal cleavage. Its colour is a dark steel-grey, inclining to pinchbeck-brown, with a metallic lustre. These properties are not sufficient to characterize the mineral. A future number of this Journal will contain an exact account of all of them.

ART. XXXIII.—ZOOLOGICAL COLLECTIONS.

1. *On the Change in the Plumage of some Hen Pheasants.* By W. YARRELL, Esq. F. L. S.

THE last shooting season having been unusually productive of hen pheasants, which have assumed more or less the plumage and appearance of the male, much discussion has in consequence arisen on the cause of this change; and the author, having had many opportunities of examining the facts, as respecting both the pheasant and the domestic fowl, was induced to notice the internal peculiarities which invariably accompany this transformation. According to an opinion of John Hunter and Dr Butter, this change only takes place at an advanced age; but Mr Yarrell considers the facts in his possession as at variance with this idea, and that the appearances in question may occur at any period of life, and may even be produced artificially.

In all the instances examined by him the sexual organs were found diseased, and to a greater or less extent in proportion with the change of plumage. The ovarium was shrunk, purple, and hard. The oviduct diseased, and the canal obliterated at the upper part, immediately preceding its infundibuliform enlargement at the bottom of the ovarium. Having opened a hen pheasant in her natural plumage for the sake of comparison, he found a similar diseased state of the organs to exist, thus proving that the disease must exist some time before the corresponding change of feather takes place. He observes, that it is no uncommon thing to find among numerous broods of pheasants reared by hand, some females, which,