

of *ytrotantalite*, which will not be found longer than that of *siderotitanite*. . . .

Vanadium

UEBER DAS VANADIN . . . (On Vanadin, a new Metal, found in bar iron from Eckersholm, an iron foundry which gets its ore from Taberg in Smoland); by N. G. Sefström. From Kongl. Vetensk. Acad. Handl. f. 1830. Published in *Annalen der Physik und Chemie* (Poggendorff), Bd. XXII. Leipzig, 1831.

MANY YEARS AGO the Bergmeister Rinmann devised a method for easily detecting whether an iron were cold-short, which depends upon the circumstance that such an iron upon etching with hydrochloric acid gives a black powder. On one occasion, when I needed an iron which was not cold-short, and for the purpose investigated iron from Eckersholm by this method, which I have described in the *Annalen des Eisencomtoirs* for 1825, S. 155., it gave, to my astonishment, the reaction for cold-shortness, although the iron from Taberg is considered the softest and toughest that we have. Time did not then allow me to clear up this behavior; but in April, 1830, I took up the investigation again, in order to see whether the black powder contained phosphorus, or consisted of some other material which it was important for me to know. Accordingly I dissolved a considerable amount of this iron in hydrochloric acid and examined the remaining black powder. During the solution the circumstance appeared that part of the iron, especially that setting free the black powder, dissolved faster than the rest, so that in the middle of the iron bar hollow veins were left.

Upon analysis of the black powder there were found in it silica, iron, alumina, calcium, copper, cobalt, and a substance which in certain respects resembled chromium and in others uranium. In what combinations these substances occurred could not be determined, since the small amount of black powder did not exceed 2 decigrams, and of this more than half was composed of silicic acid.

After several tests it was discovered that it was not chromium, and the following comparisons show also that it is equally unlikely that it is uranium. In this it is to be noted that the highest oxidation products were compared with one another, that, however, Vanadium resembles tellurium in its lower oxidation forms.

REACTIONS OF URANIUM OXIDE

Solution in Hydrochloric Acid

Color: pure yellow

Behavior with Ammonium Hydroxide

Gives a yellow precipitate, especially upon warming

With Ammonium Carbonate in Excess
Is precipitated on heating

With Potassium Ferrocyanide

Gives a brown precipitate

BEFORE THE BLOWPIPE

With large admixture of Borax

The yellow glass becomes colorless, but not the green

With Soda in the Oxidizing Flame

Does not dissolve in it

These reactions were later confirmed in the month of May in the laboratory of Prof. Berzelius. The metal was reduced by roasting in hydrogen gas, and it was thus discovered that it possesses a lower oxidation compound, giving with acids a blue-green solution, and that this as well as the higher oxide is soluble in alkalis.

A complete analysis could not be made at that time on account of other matters; and the small supply, amounting to less than 2 centigrams, was used up.

In the autumn the research was again taken up and then carried on in the laboratory of Prof. Berzelius. There the new metal was first isolated from the iron bars; but the yield even from several pounds of dissolved iron amounted to so little, that I procured a quantity of slag from the iron, from which I got a sufficient amount for investigation.

Name of the New Metal

Since this makes no difference to it, I have derived it from *Vanadis*, an alternate name of Freya, the most important goddess in Scandinavian mythology. . . .

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Commercial dress pattern manufacturers have adopted 29 of the designs for children's clothing developed by the U. S. Bureau of Home Economics.

No perfect method of "moisture proofing" wood has yet been found, but government tests show that some coatings reduce the rate of moisture absorption materially.

REACTIONS OF VANADIN

Color: orange yellow

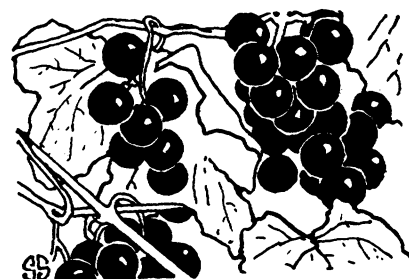
Gave no precipitate and with excess ammonia the solution upon warming became colorless

Is not precipitated

Gave a green precipitate

The green glass may become colorless, but not the yellow

Is easily dissolved in it



Fruit of Vinland

THE FIRST light touches of frost are mellowing the sharp tang of the wild grapes, and in a thousand thickets and riverside tangles small boys and other boys not so small are putting purple linings in their mouths. Wild grapes are small and inclined to run to seeds, but there is some sort of atavistic appeal about their flavor that has somehow been bred out of their politer cousins of the cultivated vineyards.

There are a number of different kinds of wild grapes in the eastern part of North America, and all of them have their virtues. Two especially, the fox grape of the Middle Atlantic and New England states and the Catawba grape of the middle South, have contributed heavily to the ancestry of all the fine domestic table varieties. It was a wild grape, probably the fox grape, that left one of the strongest of early impressions of America: the Vinland of Lief, son of Eric, was so called because of its abundance of grapes.

Farther west, the smaller, more strongly flavored wild grape known variously as wolf grape and river grape has been less amenable to culture. It has been only within the last couple of decades that breeders out in Dakota have bethought them to cross it with the Concord, thus establishing a racy-flavored, medium-sized grape of tremendously rapid growth and extreme hardiness that will resist even the blizzards of the plains and western prairie lands. This is the Beta grape. Whoever does not have it in his vineyard or arbor is missing something which a true grape lover ought to know.

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