

CHEMISTRY

Vanadium Obtained Pure

The addition of a new metal, vanadium, to the world's resources, is announced by J. W. Marden and M. N. Rich, research scientists of the Westinghouse Lamp Company.

Vanadium has been known in its compounds for a long time, according to Dr. Marden and Dr. Rich, but in spite of a century of efforts on the part of chemists no one has previously been able to produce it in its pure form. The method employed by the authors is to heat a mixture of vanadic oxide, metallic calcium and calcium chloride in an electric furnace for an hour at a temperature of nearly 1,400 degrees Fahrenheit. After cooling and stirring the resulting mass in cold water, metallic vanadium is obtained in the form of beads.

"The beads of vanadium are very bright, have a steel-white color and are quite malleable, soft and ductile," say the authors. "They can be melted in a vacuum in a high-frequency induction furnace, rolled into wire and worked up into other shapes. As far as analysis can determine, they are 99.9 per cent. pure metal.

"There is no known use for this new metal at present, but undoubtedly it will have special properties that will make it useful. Tungsten, for example, was once a useless metal, but is now of inestimable value for filaments in incandescent lamps, for high-speed tool steel alloys and many other purposes. Vanadium may, in time, prove equally serviceable."

Science News-Letter, April 23, 1927

ZOOLOGY

Pearl Buttons Threatened

They wiped out the forests from the upper end of the Mississippi valley, and that let loose heavy spring floods. They build wing dams in the river to control the floods, and that threatens to take the pearl buttons off our shirts. For the pearl button industry of the United States, well over a million-dollar affair, centers around Muscatine, Iowa, and depends on the shells of the river mussels, more often called river clams, that formerly abounded on the muddy bottom of the Mississippi and its tributaries.

The difficulty is, explains Prof. N. M. Grier of Des Moines University, who has been investigating the situation, that the flood-controlling dams allow sediment to settle in their back-

waters close inshore, and that this sediment is smothering the mussels wholesale. Closed seasons over stretches of the river during the past five years have given an opportunity for the testing of views on the depletion of the mussel beds. As a result of his surveys, Prof. Grier recommends that the sloughs or side channels be permanently closed to mussel fishing, in order that they may furnish a convenient source of mussels for restocking the main stream when legislation looking toward the improvement of present unfavorable conditions shall have had time to become effective.

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CHEMISTRY

Sugar From Wood

A new process for making sugar out of sawdust was described by Prof. Erik Haeggglund of Abo at the coal and wood chemistry conference recently held in Stockholm, where he reported that at Geneva where the process is being tried on a commercial scale, from 65 to 70 per cent. of the sawdust by weight can be converted into sugar.

For Sweden, where forestry is one of the dominating industries and where most of the sugar has to be imported, the method is likely to become of the greatest importance. Several hundred thousand tons of "wood sugar" can be produced annually from easily accessible raw materials, it was stated.

Science News-Letter, April 23, 1927

PALEONTOLOGY

Love Song of a Trilobite

This week's prize-winning poem in the News-Letter scientific poetry contest.

To thee, dear trilobite, I sing my song—

Recounting of thy virtues I'll prolong—

It is my joyful duty to enumerate thy beauty

From pygidium to cephalonic prong.

On thy dorsal side and ventral side I gaze;

Rare beauty each biramus limb displays;

I behold the matchless grace of thy chitin carapace

As it glistens in the ocean's opal rays.

With articulated segments I come kneeling;

My antennae surely must disclose my feeling;

While a vision of thine axis is an optic prophylaxis,
And thy thorax fairly sets my senses reeling.

Such symmetry, my Ordovician bud!
Thy perfection needs no ornament nor dud.

How I love to see thee snooze upon thy bed of ooze

Or coyly peer from underneath the mud.

O, descendant of thine annelidian sires,

To naught above thyself my soul aspires;

I would not leave our border to choose from higher order—

I quench all modern Pliocene desires.

Continuing this zoologic rhyme,
I must mention thy glabella, most sublime!

O, thou fairest arthropodess, thou excell'st a Grecian goddess!

I would dwell with thee through Paleozoic time.

It thrills me, as I near thee, to surprise

The love light in thy thirty thousand eyes;*

Then I scan thy facial suture and I contemplate our future

With a sense of joy, as thou may'st well surmise.

If I had a heart 'twould palpitate for thee—

Its lack impairs my love in no degree—

I'm as capable of love as the Mesozoic dove

Which, I understand, will live in times to be.

No other bug of pre-historic class
Can thy superb hypostema surpass;

Most perfect of thy genus, thou outshin'st the coming Venus!

Thou art my all, thou sweet crustacean lass.

Sweetheart, I dream of thee both day and night,

And to protect thee I would quickly fight;

So, my dear, let naught alarm thee,
for should any seek to harm thee

He shall feel my very fiercest trilobite.

—Arthur G. Bennett.

* "The number of lenses in the compound eye (of a trilobite) may vary from fourteen to the astonishing number of fifteen thousand. Imagine an animal with thirty thousand eyes!"
—Pirsson and Schuchert, *Textbook of Geology*, 1915. Part II, p. 606.

Science News-Letter, April 23, 1927