

The Oxford Dictionary's first equivalent for 'pick out' is 'select.' Miss Hooke neither directly nor indirectly suggests whether the selection was a 'random selection' or a 'biased selection.' I do not know what her views on that point may be. Personally, I think a series of crania extracted from a much larger heap for show on shelves is liable to be biased. Prof. Parsons wrote: "It was evident from the debris that women's and children's skulls had, owing to their fragile nature, suffered more seriously than those of men, and this fact no doubt accounts largely for the excess of male over female skulls on the shelves." What Prof. Parsons wrote in 1908 would apply equally well to the more slender and lightly built crania of men as well as of women. It is a sound rule of craniometry that all fragments should be pieced together where possible, and all broken crania should have their available measurements taken, otherwise the selection is far from a random sample, but consists of the thicker and very often the larger crania. The Hythe crania are worthy of careful study, but that study involves four or five years of continuous work, with the piecing together of fragments and a complete system of measurements on every available skull.

THE EDITOR OF *BIOMETRIKA*.

Surface Structures of Fractured Flints.

RECENT letters in *NATURE* by Reid Moir and W. J. Lewis Abbott on surface structures of fractured flints prompt this note.

We had hoped to learn, by a study of the patina, the elapsed time since the original chipping was done. In some cases the patina seemed to be due to dehydration, but in any case it is caused by 'weathering,' and the depth of the patina depends on climate and time. The velocity coefficient of such reactions should be determinable, and an extrapolation for local conditions might give at least interesting results.

We found the flint to be of so many varieties, when judged by surface changes due to heating, that no orderly report is possible. But a peculiarity in the case of English flints from Grime's Graves may be of interest. The surfaces of these old flints received from Mr. Reid Moir are nearly white (weathered). The interior is transparent to translucent and is seal-brown in colour. After heating at 600° C. for several days, a fresh-cut surface of this flint apparently remains unaltered, or takes on a clear, varnished appearance. A surface having the patina of age retains it on heating, but discloses the transparent, varnish-like layer beneath.

The mass of the flint, except for these surface effects, is completely changed to a white, opaque material. In other words, high temperature in the case of this particular flint exactly reverses the apparent effect one might expect from weathering. The white patina of Nature is replaced by a transparent surface, and the inner mass appears 'weathered' or white. Can this be due to the rupturing forces of contained water? It does not occur in American so-called flints.

W. R. WHITNEY.

General Electric Company,
Schenectady, New York, June 3.

Smooth Electrodes for pH and Conductivity Measurements.

A COMPARATIVE study of different electrodes for the determination of the concentration of hydrogen ions has shown us that quite excellent results may be obtained with platinum electrodes covered electrolytically with gold and with a quite thin smooth metallic layer of platinum, iridium, rhodium, or

palladium. A constant potential may be reached in a much shorter time than with the same metals in the form of a black deposit.

This led us to try the same electrodes for conductivity measurements. Electrodes coated with gold and metallic platinum proved to be much superior to electrodes coated with platinum black. Under conditions where with platinum black electrodes it was difficult to find the minimum of sound, with platinum-gold-metallic platinum electrodes the minimum (even in methyl-alcohol solutions) was extremely sharp. On the other hand, electrodes coated with gold and rhodium gave us unsatisfactory results. We are not quite sure yet about iridium and palladium electrodes.

In this connexion it is interesting to note that a platinum foil coated with gold and metallic platinum acts catalytically on a mixture of hydrogen and oxygen, whereas iridium, rhodium, and palladium under the same conditions do not act catalytically or very feebly. We hope that a further study of these thin layers of metals of the platinum group will permit us to establish more clearly their catalytic properties.

I. I. SHUKOFF.

University, Leningrad,
June 11.

Florentium or Illinium?

MY attention has been directed to the statement of Prof. Rolla in *NATURE* for April 30, p. 637, in which he claims priority for the name florentium for element No. 61. He says: "We believe, then, that the priority in the discovery of element No. 61 belongs instead to those who first had sure data as to its existence."

On this basis the name illinium deserves priority. The fact that Prof. Rolla deposited a *plico suggellato* instead of publishing his paper, demonstrates that he was not, at that time, sure of his discovery. When Harris, Hopkins, and Yntema published their paper and gave to element No. 61 the name illinium, they were sure of their results on the basis of four independent lines of evidence: (1) The 135 spectral lines referred to in *NATURE* (Feb. 26). (2) The concentration of illinium in rare earth fractions between neodymium and samarium. (3) An absorption spectral band characteristic of illinium. (4) The X-ray spectra.

W. A. NOYES.

Urbana, Ill., June 4.

Specimens of Tropical Timbers.

It may perhaps interest some readers of *NATURE* who are concerned with the study of tropical timbers, to know that a certain number of duplicate timber specimens from the Burma type collection are available for distribution to museums or research institutions.

The specimen blocks, which are 6 in. × 4 in. × 2 in. in size, have been made from trees which have been individually identified botanically, with check identifications at the Forest Research Institute, Dehra Dun, and at Kew, the original sheets being in the forest herbaria at Maymyo and Dehra Dun or in certain cases at Kew.

No charge will be made for the specimens except for packing and freight.

A list of the species available can be obtained from the undersigned.

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(Conservator of Forests.)

Utilization Circle, Burma,
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May 3.