



BOTANY

### The Nymphs' Flower

See Front Cover

**S**ERENE, cool, immaculate, the water lily floats beneath the summer sun, where the big flat drops of water shine like silver coins on the round, flat leaves. The water lily has been the delight of poets of all ages and peoples. Of moralists, too, who like to reflect that all that superb beauty has been extracted from the black mud of the bottom, where the rootstocks of the plant have their hold.

There are only a few kinds of water lilies in America. The white one is the most familiar, as well as the most beautiful. And it has the advantage over the European white water lily in that

it is very fragrant. Then we have a smaller yellow species, vulgarly called "cow lily" or "spatterdock" in the eastern states: but in the Rocky Mountains, where the white one does not grow, a second yellow species reaches a much larger size.

The tropics are the real home of the water lilies; here they develop all sizes and colors, including delicate pinks, glowing reds, and gorgeous blues. The great Brazilian species, *Victoria regia*, has inconspicuous flowers, but leaves so large that they will bear a grown man's weight.

Botanical names sometimes sound harsh to the layman, but there can be no quarrel with the Latin names of the water lily. There is some disagreement among botanists as to its proper name. One group calls it *Castalia*, which is the name of a fountain where the Muses of Greek mythology used to come. Other botanists, following the lead of the great Linnaeus, name it *Nymphaea*, which needs no explanation.

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But, if that were so, points out M. Thon, the hydrogen atoms which consist of just such a combination of a proton and an electron should have the tendency to be transformed spontaneously into neutrons, which so far as we know is not the case.

Both the neutron and the positron have been discovered during the last year or so, the former in England, and the latter in America, by Dr. C. D. Anderson of California.

Dr. Anderson in March also made the suggestion that the proton, previously considered an elementary particle, may be a complex combination of a neutron and a positron

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### From Page 23

They were one group which was not over-expanded at the time when opportunity depression hit them. In effect, they sold the market short and made their fortunes in the steady decline of reptilian values. The roots of that great modern spreading tree of mammalian types were firmly anchored in the very depression which was too drastic for the optimistic dinosaurs who, to the final crash, continued bullish on 'Brawn not Brains, Inc.'

So far Dr. Croneis. He does not tell the final tale, or point the final moral, perhaps as being too obvious. But for the sake of completeness, the story of man himself might be added.

For man also was born of a depression, one of the greatest of depressions of more recent geologic time, the Pleistocene Ice Age. Human beings may have existed on the earth before the glaciers came, burdening the land over half Europe and North America and chilling the rest far down toward the tropics, but if they did we have no very conclusive evidence of it. Such pre-glacial men, if they existed at all, lived in days of ease and didn't have to hustle for a living. So, in all likelihood, they would have been contented to remain very much like their zoological cousins, the apes, clever and entertaining up to a certain point, but dull beyond that, and quite irresponsible and improvident.

The glaciers changed all that. By the time the Ice Age was half over we have plenty of evidence that man was on the job, looking out for Number One and Family in first-class order. He had learned to keep warm in spite of the glaciers, by taking to caves or

PHYSICS

## Protons Seen as Source Of New Atomic Particles

**T**HAT THE NEWLY discovered particles, neutron and positron, supposed to be fundamental bricks from which all matter is built, are formed from the break up of protons, positively charged atomic hearts, is the view put forward by M. N. Thon, of the Institute of Chemistry of Paris, in a communication to *Nature*. The small number of neutrons and positrons met

with in the Universe is easily explained by the fact that a large amount of energy is needed to break up the protons.

M. Thon looks upon the neutron as an elementary material corpuscle without electric charges. The usual view taken considers the neutron as an aggregate of opposite electrical charges formed of a proton and an electron.

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