

Concerning Sandals

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discarded leather clothing and hats for lighter and more flexible material.

The Japanese and Chinese seem to have gone a step beyond us in this matter. We really need little or no foot covering in our houses, and for outdoor use the shoe best adapted to the double purpose of leaving the foot in its natural condition and protecting it against the heat, cold or dampness of the pavement, the jolt of the step, and the feet of others, would be an elastic felt shoe about half an inch thick with a waterproof coating. The Chinese shoe is the nearest approach to this, as it is light, soft and thick. But it makes the foot look big, and this objection, being an esthetic one, is invulnerable, so there is no use discussing it.

It is curious how long a piece of apparel remains in use after it has lost its reason for existence. Some of us can remember when boots reaching nearly to the knees were still worn in cities although there were no mudholes or brier patches to wade through. At the present time there is no reason for wearing heavy and high shoes in summer, yet only part of the urban population has adopted the lighter and lower styles. But the movement though slow is continuously in this direction. Shoes get more décolleté every year. This process of dematerialization will go on till there is nothing left of the shoe but its sole. Then we shall have the sandal, which is already coming into use, chiefly it is true for children, but the age limit is rising. Each summer more women adopt them and even an occasional member of the more conservative sex. The sandal is in some circumstances the most satisfactory compromise between hard shoes and barefootedness, for it gives stiffness and protection where it is most needed and yet leaves the foot undeformed and aerated.

Science News-Letter, September 10, 1927

The blue color of the snake's blood is due to copper.

Tuberculosis among Eskimos is prevalent because of crowded conditions in their homes.

A man's hat caught in the ice of a slowly moving glacier took 12 years to travel a mile.

Half the children under one year of age who contract scarlet fever die of the disease.

GENETICS

The Lability of Genes

Quotation from PROMETHEUS—H. S. Jennings—Dutton.

Not only what the cell within the body shall become, but what the organism as a whole shall become, is determined not alone by the hereditary materials it contains, but also by the conditions under which those materials operate; or by other materials that may be added later. Under diverse conditions the same set of genes will produce very diverse results. It is not true that a given set of genes must produce just one set of characters and no other. It is not true that because an individual inherits the basis for a set of characteristics, he must have those characteristics. In other words, it is not necessary to have a certain characteristic merely because one "inherits" it. It is not true that what an organism shall become is determined, foreordained, when he gets his supply of chemicals or genes in the germ cells, as the popular writers on eugenics would have us believe. The same set of genes may produce many different results, depending on the conditions under which it operates. True it is that there are limits to this; that from one set of genes under a given environment may come a result that no environment can produce from another set. But this is a matter of limitation, not of fixed and final determination; it leaves open many alternative paths. And even the limitations lose their sharp definition when we contemplate the possibility of introducing other chemicals among those produced by the original genes. Every individual has many sets of "innate" or "hereditary" characters; the conditions under which he develops determine which set he shall bring forth. The characteristics that appear under training are as much inherited characters as those appearing under other conditions; for the conditions help determine the characters in the one case as in the other. These sweeping statements are substantiated by precisely-known facts in many organisms.

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Electric brakes for automobiles are predicted.

Silk culture is being fostered as a new industry in Mexico.

Fountains which sprayed rosewater were a luxury of wealthy Romans.

Say you saw it advertised in the SCIENCE NEWS-LETTER

True Story of Archimedes

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in Wiesbaden. The antiquity of the mosaic is well attested by archaeologists of authority who put it at the time of the early Roman empire.

"Four birds resembling partridges occupy the four corners of the square mosaic. In the center of the border on each of the four sides is a bowl from which two leaf tendrils extend, one toward the bird in each corner. This beautiful border encloses the Archimedes design which tells the real story of his preoccupation and death. At one side a Roman soldier advances, his drawn sword in his right hand. With his left hand he points behind him toward the door with the gesture that clearly belongs to some such command of 'Begone!' Seated in a broad-backed chair is a bearded man of dignified demeanor who holds the two sides of an abacus, or counting board, on a low three-legged table standing before him. He is working with the abacus, which as is well authenticated, had a compartment on its face next to the lines of counters, on which in sand or dust one might draw figures. The scientist looks up in momentary amazement at the—to him—inexplicable soldier who has burst in so rudely upon him.

"The great Archimedes, then, was killed by a Roman soldier but not while he was standing in a room drawing mathematical designs upon the sand or dust on the floor. He met his end while he was seated in his study with an abacus before him on a table, on which he was originating some new mathematical proposition."

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