ARCHAEOLOGY

True Story of Archimedes

Fresh light on the manner in which Archimedes, the Greek mathematician of the third century B. C., met his death has been brought to light by an early Roman mosaic now in the possession of a noble family in Germany, according to information received by Dr. Ralph V. D. Magoffin, president of the Archæological Institute of America.

The story of the death of Archimedes is one of the best known tales of classical literature and is one of the stock instances of the eternal combat between ignorant brutality and the search for truth.

"Marcellus, the Roman general," explained Dr. Magoffin, "captured Syracuse in 212 B. C. Some of his soldiers came into a house in the suburbs, where they found a man, whom they ordered to leave. He paid no attention to them. He was engrossed in affairs of his own. He was drawing mathematical designs with a stick in the sand on the floor of his house. One of the soldiers again ordered this queer and inattentive man to get out. As his order was not obeyed, the soldier killed the elderly scientist.

"Cicero and Livy handed down the story about the death of Archimedes with the Latin words *in pulvere describere,* which means drawing figures in the dust. No one of the later commentators seems to have questioned either the mad housekeeping of Archimedes in having so much dust on his flooor that he could trace mathematicaal figures in it with his staff, or the unlikelihood of his having sand on his floor at all. In fact, it is strange that scholars did not jump to the right conclusion before, especially as there was a tip in Apuleius, whose reference in one place to an abacus and sand should have put them on the right track.

"Joseph Napoleon and Joachim Murat, while the French were in power in Naples, conducted considerable excavations at Pompeii and Herculaneum during the years 1806 to 1815. They found a great many good things, the largest part of which were kept in the family, as the sale in 1860 at Rome of the collection of Jerome Bonaparte, after his death, would seem to certify. Among the purchases from that collection was a small mosaic which was acquired by a nobleman from Germany. It is still in the possession of a German countess of the same family in her house

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BIOLOGY

HERBERT SPENCER JENNINGS

Biologist and Philosopher

Almost every one who ever studied any of the biological sciences at the Johns Hopkins University will tell you, with a brightening reminiscent eye, that the best thing he did there was attend Prof. Jennings' seminar. A seminar is very different from a lecture course, in that the professor listens while everybody else talks (sometimes several at once), but it is very like a lecture course in that the whole atmosphere is still dominated by a single personality.

And the personality of Prof. Jennings makes the atmosphere of his seminar a very favorable one for minds that are moulting their adolescent plumage and preparing for flights of their own. No one can puncture a prejudice more noiselessly and with so little pain. A somewhat shy man himself, no one can more sympathetically induce a shy youth to venture an opinion. Wholly free from cocksureness, he will listen tolerantly to the most dogmatic of declarations; and he knows that gentle ridicule is a far more devastating blast than the most withering winds of scorn.

In the scientific world at large, he figures prominently as a scholar, specializing in the behavior and genetics of animals, particularly of the protozoa. The innumerable cultures of *Paramecium* he nursed during his study of the evolution of these familiar, fantastic creatures have become a matter of proverb.

Prof. Jennings was born in Illinois in 1868. He studied at Michigan, Harvard and Jena, and after "teaching around" for a number of years was called to the Hopkins, where he has been a member of the faculty since 1906.

HYGIENE

Concerning Sandals

By Edwin E. Slosson

George DuMaurier had the unique distinction among novelists of devising a new attraction for his heroine, a well-shaped foot. Ladies with perfect eyes, noses, teeth, lips, hair, hands and even ears had always been common, at least in fiction, but the idea that one could have a perfect foot so took the world by surprise that the book had an unprecedented sale in the nineties and still finds readers. Everybody except those restrained by their principles fell in love with Trilby.

Now this unique attraction of Trilby's was not due altogether to an exceptional gift of nature, but to the fact that she never had worn shoes. Weissmann's theory that acquired characteristics are not inherited receives additional support in that in spite of artificial deformation of the feet of both sexes by hard and tight shoes for generations, the feet of the newborn are still constructed on the old model. Man's intent has been to make himself a hoof such as the horse has developed out of its digital paws. The horse of the Cretaceous period probably had five toes, soft-padded. His descendant of the present day has a compact bunch of bones bound in by a hard, horny integument. We accomplish the same end when we compress our toes into a rigid shoe.

The purpose is, of course, in both cases to increase the speed and reduce the wear and injury of walking on hard ground. Even the horse's hoof is not hard enough to stand our paved streets and we are obliged to reinforce it with an iron rim. Our tender feet have to have some protection against heat and cold and bruises.

There are two ways of protecting from wear and jar. The covering may be hard and enduring or it may be soft and replaceable. A fort can be protected with granite or with dirt. A wheel can be tired with iron or rubber. The progress of evolution, natural and industrial, has been generally toward the yielding rather than the resisting material. The early animals were encased in shell or scale armor; the later and more successful models have soft flesh and tender skin on the outside. The hoof I have already noted as an exception to this rule. Another is our own foot covering, which has remained of leather, although we have long since

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