

PALEONTOLOGY

Giant "Sea Scorpions"

Volcano stopped giant "sea scorpions" dead in their tracks as they crawled over Ohio's ancient salt sea, scientist says in reporting on fossil find.

➤ GIANT "SEA SCORPIONS," some six feet long, that crawled over the bed of the ancient salt sea covering Ohio, then were stopped dead in their tracks by volcanic eruptions 400 million years ago have been found in Ohio.

"One of the most significant discoveries of eurypterids—sea scorpions—ever made," the fossils represent the largest, best preserved and first complete individuals ever excavated in rocks so old, Dr. Kenneth E. Caster of the University of Cincinnati told the Paleontological Society meeting with the Geological Society of America in Detroit. He reported on his joint investigation of the fossil find with Erik N. K. Waering of Tulsa, Okla.

The scientists believe that a great fall of volcanic ash over the surface of the sea caused the animals' sudden death and burial, preserving the fossils near Manchester, Ohio.

The giant fossils have powerful scissor-like pincers at the end of their abdomens. Such pincers are completely unknown in the fossil record, Dr. Caster said. Only the "earwig", an insect living along sea coasts, has such an appendage today. The pincer, the scientists suggested, may have been employed in sea scorpion courtship maneuvers.

Although scraps of such animals have been known from the rocks found near Manchester, this is the first time that complete individuals have been encountered. Some of the specimens have been freed from their ashbed coffins so completely that they may be handled as one would a crab.

Modern scorpions and spiders are living relatives of the ancient eurypterids. But even when these primitive sea scorpions were alive, 400 million years ago, they may have been "living fossils" preserving an anatomical plan from a much older time.



CLASSROOM TELEVISION—High school science students get a preview of the television microscope that will enable an entire class to look at a specimen simultaneously, demonstrated here by Dr. V. K. Zworykin of RCA Laboratories.

The great age of the fossils may be better understood when their 400 million years are compared to the oldest cave men known on earth—probably not more than one million years old.

What still puzzles geologists is the source of the volcanic ash. No ashbed of this age had previously been described in this section.

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PHYSICS

New Positive Particle Without Mass Discovered

➤ A NEW massless fundamental particle in the subatomic world seems to have been discovered. It is electrically positive, equivalent to the neutrino, which is an undiscovered entity that not only has no mass but no electrical charge as well, combined with high energy that causes it to pass through theoretically anything material.

Two scientists, F. C. Champion and A. A. Ahmed, of the University of London's King's College Wheatstone Laboratory, who report in a communication to the journal *NATURE* (Nov. 3) the existence and nature of the new "positive particles," contend that "there does not seem less evidence for the reality of their existence than exists for the neutrino at present."

Evidence of the positive massless particles is contained in 20 out of 12,000 cloud chamber tracks of particles emitted from radium E. These had passed through a thin aluminum foil and had a curvature opposite from that of the usual electron tracks. Computations showed that these tracks could be made by particles with an electronic charge but zero rest mass.

Possibly the new particles, if real, could be called positrinos.

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MEDICINE

Epsom Salt in Muscles Stops Pregnancy Ill

➤ EPSOM SALT, or magnesium sulfate, injected into the muscles will save many a pregnant woman who has developed high blood pressure, dropsy, headache and other symptoms of pre-eclampsia from developing eclampsia with convulsions and coma, or unconsciousness.

And adequate doses of epsom salt injected into the veins is more effective in saving lives from eclampsia when that develops than other forms of treatment. So Dr. Willard R. Cooke, professor of obstetrics and gynecology, University of Texas Medical Branch, Galveston, reported to the Southern Medical Association meeting in Dallas.

His report was based on a study of 501 cases of pre-eclampsia and 238 cases of eclampsia treated by various methods, including the epsom salt one.

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