

this the serum contains some sort of substance that works the other way. It **restrains or prevents** the multiplication of cells and so inhibits growth. The amount of this inhibiting factor in the blood increases with advancing age, rapidly at first and then more slowly.

This discovery affords a way of measuring the age of an animal by observing the effect of its blood serum on the cells under cultivation in the flasks. When, for instance, the cells were supplied with serum from a hen six weeks old they lived 46 days. In serum from a three month old hen they lived 30 days. In serum from a three year old hen they lived 15 days, and in serum from a nine year old hen the cells survived only 4 to 6 days. If this test could be sufficiently simplified we might be able to ascertain with accuracy the age of a spring chicken, instead of having to take the dealer's word for it.

Experiments with the blood of dogs gave the same results. The serum from a dog eight years old restrained the growth of the cells ten times as much as serum from a two weeks old pup.

Whether the method can be applied to human beings remains yet to be determined. If it can be we may be able some day to determine not only how old a person actually is, but why. And if the growth-promoting and the growth restraining factors can be identified and independently prepared it may be possible to regulate their balance and restore it when it is disturbed.

ROCKS AND HILLS OF DAYTON RESTIFY FOR EVOLUTION

By Watson Davis

The very hills themselves testify for evolution,

The little town of Dayton, to be the scene of the now famous trial of Prof. J. T. Scopes for violation of the Tennessee anti-evolution law, could not be better placed geologically as the site for such a test to determine whether natural law, made by God, or statute law, made by man, shall prevail.

The very ground the courthouse is placed upon, the rocks of the landscape with the embalmed life of ages ago will all be irrefutable witnesses for the defense if men will but use their eyes and their brains.

West of the little country town of Dayton is Walden's Ridge, named for an event in a previous struggle that concerned the freedom of the body of man. It is appropriate that this ridge is composed of the youngest and most recent rocks of the region thereabout and that below it, exposed by the the wear and wash and the uneasiness of the earth for milleniums, thereis layer upon layer of rocks each representing different and progressively older deposits. The ridge itself is composed of sandstone interleaved with layers of coal, the atural source of one of the commercial products of Dayton. This is the record of the rocks that testifies today that there was a time when trees looked like gigantic ferns and had spores instead of seeds. Look at a piece of coal under the microscope and those spores can be seen and identified today.

Close by the coal seams are layers of iron ore made by the accumulative activities of millions of bacteria millions of years ago. And lower down in the hills

and earlier in age are strata of limestone, useful to man in utilizing the iron. These many layers of rocks were made by nature in the geological era now called by scientists the Carboniferous on account of its coal. Below them there are Devonian and Silurian rocks and earth upon which the town of Dayton itself rests, and out of which spring the strawberries and peaches, the principal products of the region.

In all of these rock layers evidence of prehistoric life can be found. There are spores of the trees that made the coal, calcified remains of trilobites, ancestors of the modern cockroach, fossil tree trunks, and other animal and vegetable remains of a time that antedated man by millions of years.

Is it any wonder that it was Dr. G. W. Rappleyea, superintendent of the Cumberland Iron and Coal Co., who instigated the anti-evolution test case against the young Dayton high school science teacher, Scopes? For in his work of finding iron and coal, he has learned the reliability of the record of the rocks.

Scopes, too, knows how to read the story chronicled in limestone, shale, iron and coal. And it makes him more determined that he shall not be prevented from teaching his eager young pupils the most basic, most interesting and most fundamental facts of nature.

Perhaps, if the question of the reality of evolution arises in the evolution trial set for July 10, it would be well for the judge to have the jury take a walk among the hills and see for itself just how, at one stage in the world's history. Nature slowly and purposefully conducted the building of the earth.

TENNESSEANS READING EVOLUTION BOOKS

The fundamentalist legislator who wrote the anti-evolution law of Tennessee will hardly believe that he has materially helped the dissemination of the scientific facts of evolution.

But there is no question but that the people of Tennessee have learned more about evolution since the national interest in the Scopes case at Dayton, just an hour's train ride from Chattanooga, than they have since Darwin started to study nature.

Evolution has long been unorthodox. Darwin was linked with the devil. Now when evolution is outlawed in the schools, when the law says: "Don't", when an attempt is made to hide the facts, the people start to think for themselves.

The Carnegie Library of Chattanooga, somewhat bulging with good books, has a surprisingly adequate shelf of books on evolution. Before Scopes was arrested for the heinous crime of teaching evolution these books on evolution were consulted only occasionally. Now every book on evolution is in circulation or spoken for. Business men, school children to whom evolution is forbidden fruit, and many others are reading Darwin's "Descent of Man", Osborn's "From The Greeks to Darwin", Huxley's "Essays", and dozens of other books by Conklin, Kellogg, LeConte and other evolutionists. The bookstores report a brisk demand for evolution literature, and one shop handling lowpriced pamphlets has had to reorder the evolution booklets several times. Evolution is taught on the front page of every newspaper. In Nashville, Knoxville and Memphis similar conditions exist.