

## Anniversaries of Science

**April 13, 1923**—Lick Observatory announced that photographs taken of sun and surrounding stars in the eclipse of September 21, 1922 confirmed Einstein's theory of relativity.

Nobody had discovered or suspected such a displacement of star images about the sun until Einstein predicted it from his mathematical theory. As figured out from his formula, a ray of starlight just grazing the sun's disc would be deflected toward the sunny side to the extent of 1.75 seconds of arc. The star images farther away would be displaced less according to their apparent distance from the sun.

Of course, the stars cannot be photographed when the sun is shining into the telescope, so one must wait till the sun is totally shielded from the earth by the moon. The British astronomers took advantage of the first opportunity to put the Einstein theory to the test, the eclipse of 1919, and they came back from South America and Africa with the report that the star images were dispersed as Einstein had predicted. But they had good photographs of only seven stars and have been sharply criticized in scientific circles. Since the experiment could not be repeated until the next eclipse, astronomers had to hold their breath for four years or waste it in vain disputes.

But now that President Campbell has explained to the American Philosophical Society of Philadelphia and the National Academy of Sciences at Washington the results of his observations in Australia there is little ground left for skepticism on this point. Instead of seven stars he has five sets of plates containing from sixty-two to eighty-four star images, and when these are measured with the micrometer and calculated to a common position at the edge of the sun the mean is 1.74 seconds of arc, which is almost exactly the deflection predicted by Einstein.

—Edwin E. Slosson *Chats on Science* in the Daily Science News Bulletin, April 28, 1923.

**April 14, 1895**—James Dwight Dana, the zoologist, geologist, and mineralogist, died.

As treated by James D. Dana, this conception grew into a consistent theory of mountain origin and structure which has received universal acceptance. In brief, this theory is as follows: Materials for the future mountain system are eroded from a land mass and deposited in a progressively sinking trough to a thickness of thousands of feet. After long ages the sediments in the trough are compressed laterally against the relatively solid old land; the shortening, amounting to many miles (Appalachians, 40 miles; Alps, 74), is made possible by folding or by forcing parts to override other parts. During and after the periods of folding and faulting the newly born mountain range is eroded into features which are recognized as ridges, peaks and valleys. These processes, which in detail are enormously complicated, involve regional upwarps and downwarps which are recorded over wide areas. Largely through a study of mountain ranges, with their faults and folds and enormous thicknesses of disturbed sedimentary and igneous rocks, has come the modern view of the funda-

mental structural relations; that the earth is not a liquid or molten mass covered with a crust, but a globe as rigid as a ball of steel or glass of equal dimensions, yet "plastic" or "pliable" enough to yield under the weight of even a moderate load.

—Henry Ernest Gregory: *Geology in the Development of the Sciences*.

**April 16, 1705**—Isaac Newton knighted at Trinity College at a visit there of the Queen.

In 1703, the year in which he vacated his professorship, he was elected president of the Royal Society, and in 1705 he received the honor of knighthood from Queen Anne. His university, too, had once more elected him as its representative in Parliament, and what with the Mint, the Parliament and the Court (at which he was now a great favourite), how different was the general routine of his life compared with the days of his lectures, his experiments and his calculations!

Yet he still remained a power of the first magnitude in the world of science and mathematics.—Hart: *Makers of Science*.

Science News-Letter, April 2, 1927

## Poetry Contest Closing

**The Science News-Letter poetry contest has been a success—at least we think it has—but all good things must come to an end, or people will get tired of them. Therefore the contest will close on Saturday, April 9. All contributions bearing postmarks of that date or earlier will still be entered in the competition. Those awarded the \$5 prizes will be printed in later issues of the Science News-Letter.**

**This week's prize-winner is Howard E. Brown, who teaches geology in the Classen High School of Oklahoma City. There is more exciting paleontology in the Great Open Spaces than can be found anywhere else on this continent, and Mr. Brown has appropriately chosen as his theme an epic of the Mesozoic.**

### PALEONTOLOGY

## Early Days In Kansas

This week's prize winning poem in the Science Service scientific poetry contest.

The sun blazed high o'er the eastern land

Where peat-bogs used to be,  
While lapping the edge of the jagged strand

Was the old Cretaceous sea.  
And while the roaring breakers crashed

'Gainst headland, reef and stack,  
A ganoid through the waters flashed,  
A living streak of black.

Behind him raced a mososaur,  
His sharp teeth on display;  
(His lower jaw gaped downward,  
for  
Old "Mose" was built that way);

To right and left of the hapless fish  
The ichthyosauri played,  
Thinking no doubt what a tempting dish

The fringe-finned ganoids made.

The fish recalled that in years gone by

His fresh-water uncles tried  
To breathe the air of the open sky,  
When their boggy fens had dried.  
So up he leapt into the air,  
And gulped with might and main:  
A pterodactyl waited there,  
So he came right down again.

In front huge lungfish skimmed the sea,

To multiply his woe;  
"It won't be long now," murmured he,

But he turned and plunged below.  
Down to the depths he scurried on  
To shake that murderous throng,  
Where the giant turtle, Archelon,  
Crept clumsily along.

Now Archelon, it might be said,  
Was a brute depraved and cruel;  
And he would make our loggerhead  
Look like a molecule.  
He seized the struggling ganoid frail  
Within his monstrous jaw;  
And herewith ends our little tale  
In his capacious maw.

We little think as we ride at ease  
In auto or in Ford,  
Across the sunflower-dotted leas  
Where once the oceans roared,  
Of what poor fish we might have been

If it had chanced that we  
Had lived in the Mesozoic, in  
The old Cretaceous sea.

### EPILOGUE

Whence came those forms that were  
living then?

Is a question quite perplexing;  
Why did they disappear, and when?  
Are problems also vexing.  
What changes will the future see?  
All questions of such a nature,  
I must admit are too much for me;  
Go and ask the legislature.

—Howard E. Brown.

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Fewer food animals were killed  
in this country in 1926 than in 1925,  
yet 240 million more pounds of meat  
were produced.

Photographers of wild animals  
sometimes use artificial animals as  
decoys to draw wary subjects within  
range of the camera.