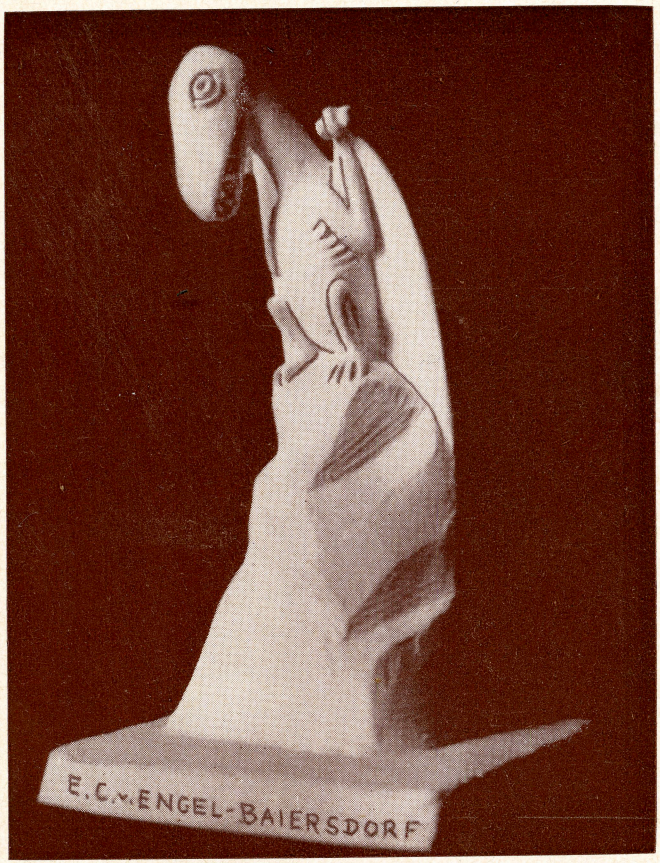
Incidental Papers

Two Radio Broadcasts

By MRS. J. S. LAURIE



THE DIMORPHODON MACRONYX

Nature's earliest known flying machine, lived 125,000,000 years ago (Jurassic Age).

Reconstruction by Mrs. Erna C. von Engel-Baiersdorf, F.R.A.I.

April, 1951.

Introduction

THE subject matter contained in the following pages was delivered by Mrs. J. S. Laurie, of 881 Sinclair Street, West Vancouver, in two radio addresses over CBR. We are pleased to be permitted to print them herewith. We must own, however, to a tinge of regret that Mrs. Laurie has been quite so candid in disclosing the frailties both of the circular stairway and the leaky roof. Actually, up to date, not a single visitor has been killed or even seriously injured in mounting those stairs, and with a roof held together with Scotch tape, one may expect a few drops of rain to enter. We have cautioned our attendants not to mention these unfortunate things to visitors, especially if it is not raining at the time.

That many of our choicest exhibits are of necessity stored in the basement cannot be denied, but we shall forget these things when we are finally located in the fine new building which will be entirely fireproof, and shut out both rain and drafty air. This, we feel certain of achieving before long, for it is very evident that the exhibits in many cases are beyond price, and it would be impossible to replace them. Ladies must not worry too much about the future conditions to which the human race is drifting, when they may not be able to readjust their hats during a heavy wind, as Mrs. Laurie advises us, for Madam Baiersdorf assures us that is still a long way off.

The engaging charm evident in the articles we reproduce, lies in the splendidly simple form of language in which the speaker clothed her discourses. Couched in phraseology evidently designed to captivate the greatest number of readers, her story dealing with the biography of the earth faithfully reflects the background of modern thought along the lines of general geology. To cover this immense subject in the space of a few minutes was an exceedingly difficult task, nevertheless Mrs. Laurie has led us along pleasing avenues of thought, through fields which are ever pleasant to the general public, and the journey has been very enjoyable.

Geology is not, as yet, a completed science, and the story it tells is being continued as the years pass. Mankind thirsts to know more regarding the age of this, our place of abode,—this spheroid upon which he dwells, and from which he has, so far, been unable to wander, except in thought.

Not so long ago we looked upon the age of the earth as approximately 6,000 years. As late as in 1876, Dr. James Croll, one of the most profound thinkers of his time, stated his conclusion that "the lapse of time since the solidifying of the earth's crust cannot be less than 60,000,000 of years". This is now known to be a much too low an estimate.

It remained, however, for Madam Curie, the French scientist, through the discovery of radio-activity in 1902, to throw open the door to more spacious Halls of Learning, which have enabled us to set a date now accepted as precise as to the age of the planet upon which we ride through space in a yearly tour of varying conditions of summer warmth and winter cold, of verdant beauty and sombre barrenness, with regularly occurring days provided for our every activity, and nights for our rest and recuperation.

It was this discovery of radio-activity at the turn of the century which was further examined and explored by Dr. Rutherford which has enabled us to more accurately date geologic time. "The chief radio-active elements uranium and thorium", says a writer, "occur in certain types of granitic rocks, and in certain

types of mineral veins, such as the pitchblende veins of Bohemia in which Madam Curie first discovered radium.

"Regardless of chemical association, heat or pressure, or any other known condition, the radio-active elements undergo a slow disintegration, into lead and helium. By-products of this atomic disintegration of the atom of uranium are eight atoms of helium gas which, being liberated at a certain known rate, result in the forming of lead which is found to be stable and not subject to further change.

"It is with the loss of the eighth atom of helium that pure lead is formed. THIS RATE OF CHANGE IS CONSTANT, *and the lapse of time necessary for it is known definitely."*

It points to an antiquity of rather more than 2,000 millions of years. The late Sir James Jeans stated his belief that this was a close approximation of the lapse of time since our planet became a separate entity. In the table herewith which is furnished us by Madam Baiersdorf, this beginning of terrestrial existence is given as about 2,500 millions of years.

To Mrs. Laurie we extend the heartiest thanks of the Art, Historical and Scientific Association in permitting us to print these two radio broadcasts, and our congratulations in the production of this very informative and interesting amount of material which she has treated in such a pleasing and understandable manner that "John Doe" cannot fail to know what it is all about. We are sure that the young student of Anthropology will welcome the bright and engrossing text, dealing with a subject often so difficult of access.

GEORGE GREEN.

Vancouver, April, 1951.