

tion. Still another specimen of the same tumor, on being measured twenty-four hours after inoculation was found to have increased in size fourteen fold, and after forty-eight hours twenty-two fold, the changes being plainly visible to the naked eye.

It is impossible at the present time to estimate the value of these observations. From the view point of the biologist the production of active manifest life—for where there is cell proliferation and growth there is manifested an active life process—is of infinite academic interest. From the philosophical standpoint a new factor is added to the great problem of life and death. To the mind of the experimental worker in medical science an entirely new field of possibility is thrown open for the study of cancer. Now that it is possible actually to see tumor cells grow and to study directly the various factors which stimulate or retard that growth, it is not extravagant to say that a gigantic stride has been taken toward the discovery of the cause of cancer and the ultimate goal of its prevention and cure.

T. WOOD CLARKE

UTICA, N. Y.

A NEW LABYRINTHODONT FROM KANSAS

THE National Museum has recently sent the writer, through the courtesy of Mr. C. W. Gilmore, two specimens which represent a new form of the labyrinthodont amphibia. The specimens comprise a nearly perfect left mandible and a portion of the left side of the face of possibly the same individual. The material comes from "The Coal Measures of Washington County, Kansas." It was among the collections of Dr. Gustav Hambach, now the property of the National Museum.

The stereospondylous amphibia have been suggested in the Carboniferous of North America by several discoveries, notably the two vertebræ described by Marsh as *Eosaurus canadensis* and the tooth from the Coal Measures of Kansas referred by Williston to *Mastodonsaurus*. This is, however, the first actual discovery of any considerable labyrinthodont material from the Carboniferous

(? Lower Permian) and as such it is of great interest.

The anatomical characters are so similar to those of *Anaschisma* described by Branson from the Triassic of Wyoming that the species is ascribed without hesitation to the Stereospondylia. The differences between the forms are of generic significance, although the distinctions are not so great as we should expect in forms which are so widely separated stratigraphically. No character in mandible, skull or ribs is primitive. The form will be described and figured soon as a new member of the Labyrinthodontidæ. ROY L. MOODIE

THE UNIVERSITY OF KANSAS,

October 24, 1910

SPECIAL ARTICLES

THE SUPPOSED RECENT SUBSIDENCE OF THE MASSACHUSETTS AND NEW JERSEY COASTS

MUCH evidence has been adduced in support of the theory that various portions of the Atlantic coast have been recently undergoing a gradual subsidence, and this movement is believed by many to be still in progress. The rate of subsidence has been calculated as one foot per century for the Massachusetts coast, and from one to two feet per century for the New Jersey coast. Among the lines of evidence which appear to support the theory are the following: Indian shell heaps are found below high-tide level; stumps of trees are found in place in salt marshes, showing that the trees were killed by the invasion of salt water; peat formed by salt-water vegetation is found overlying fresh-water peat; familiar landmarks are covered by high tides to greater depths than formerly; land owners along salt marshes find that the marsh areas have recently encroached upon the upland areas; the tides have increased in height to such an extent that certain tidal mills can no longer be operated as effectively as formerly; dykes erected to keep the tides out of certain salt-marsh meadows are themselves submerged by the rise of the tides; accurate measurements show that a bench-mark established at Boston three quarters of a century ago is now