

**ON A TRENTON ECHINODERM FAUNA AT KIRKFIELD,
ONTARIO.**

BY

Frank Springer.

In the course of excavating the Trent canal, a considerable cutting was made through the lower part of the Trenton limestone at a point near Kirkfield, in Victoria county, Ontario, Canada. Some of the layers proved to be extremely fossiliferous, and extensive collections were made there during the years 1906-9 by the staff of the Geological Survey of Canada. Among these were a considerable number of Echinodermata, which, through the courtesy of Mr. R. W. Brock, Director of the Geological Survey, have been placed in my hands for examination. These specimens, together with others previously collected for the author by Mr. Edwin Kirk from the same locality, form the subject of this report. During the years 1908 and 1909, collections were also made in the Kirkfield beds for the University of Toronto, which have been studied by Dr. W. A. Parks, of that institution, and some new species described in papers which will be referred to later. He has obligingly furnished me for comparison a list of the species as identified by him, and allowed me the fullest opportunity for examination of the specimens in the University Museum under his charge.

The fauna of the Canadian Trenton was investigated at an early day, and most thoroughly described, by that eminent palæontologist, E. Billings—the Echinodermata in the two fine Memoirs on the Cystidea and Crinoidea known as Decades III, and IV, of 'Figures and Descriptions of Canadian Organic Remains,' published respectively in the years 1858 and 1859. Many of the species were preliminarily described, without figures, in reports of the Geological Survey for 1856 and 1857. These treatises were largely based upon collections made by Mr. Billings himself in the vicinity of Ottawa and Hull, and his many careful references to the exact stratigraphic