spores placed on sterilized peach twigs soon reproduced the *Cytospora* form. From our experiments it is quite safe to conclude that *Cytospora rubescens* Nitschke is the pycnidial form of *Valsa leucostoma* Pers. The pustules of these two forms are constantly intermingled, except on the twigs where the perithecia seldom develop. These forms resemble each other so closely in size, shape and color that it is usually impossible to distinguish one from the other without the aid of a microscope. When the epidermis of diseased tissue is peeled off, these bodies remain attached to it and appear like blisters on its inner surface.

The disease injures the Japan plum in much the same way as the peach. A full account of this disease will be published in bulletin form by this station some time during the present year.

F. M. ROLFS
MISSOURI STATE FRUIT EXPERIMENT STATION

QUOTATIONS

THE IMPERIAL CANCER RESEARCH FUND

THE report of the Imperial Cancer Research Fund for the year 1906–7, presented to the general committee at their meeting under the presidency of the Prince of Wales on Monday, is calculated to impress different sections of the community in a somewhat different manner. By those who are uninstructed in scientific methods, and unacquainted with the caution necessary for the successful conduct of scientific inquiries, it is likely to be received with some impatience at the continued absence of definite results of a preventive or curative character; while those of better qualifications for the exercise of judgment will recognize that foundations are being laid which afford reasonable hope of a successful and permanent superstructure. The general summary of the superintendent, Dr. Bashford, states that, "during the past year, the hopes of advancing knowledge of cancer have become more and more centered in experimental investigations. We have learned from experiments more of the nature of the local and of the constitutional conditions associated with the origin of cancer; and we have been able to form more definite conceptions of the nature of the change responsible for the rapid multiplication of cancer-cells." The earlier conclusions that cancer is universal in vertebrate animals, without reference to the nature of their food, that its prevalence differs greatly in extent among different races of men, that it is frequently developed in parts of the body which are subjected to continued irritation, either from industrial pursuits or in association with native customs or religious rites, that it is often consecutive to some direct local injury, and that no single form of external agency is constantly associated with its development, have all been confirmed by subsequent observation and experiment. On these grounds it is pronounced to be futile to seek for a hypothetical something common to all the external agencies associated with cancer, and to be necessary to direct attention to the common intra-cellular change which, in conformity with the biological similarity of cancer throughout the vertebrates, must intervene in the transformation of normal into cancerous tissue. As there is no evidence to justify the assumption that the disease is communicated from one person to another, the search for the clue to cancer in any species of animal must take account of peculiarities in the individuals which are attacked and in those which escape. Hence, questions of individual and of family liability have received increased attention during the year.—The London *Times*.

CURRENT NOTES ON METEOROLOGY AND CLIMATOLOGY

LIGHT AND HEALTH

SURGEON CHAS. E. WOODRUFF, of the United States Army, in some notes on "Actinophysiology and Actinotherapy," published in *American Medicine* (Philadelphia) for April, calls attention to the injurious effects of excessive sunlight, a subject on which he has already written several articles and one book. Among the points mentioned are the retardation of vegetable growth by sunlight; the injurious effects of sunlight upon animals; the retardation of human growth by sunlight, so

that the tallest men are found in the less sunny climates; the advantages of cloudy weather in increasing the vital activities; the value of dark forests as sanitaria; the dangers of too much light in the treatment of tuberculosis, etc. Many of Major Woodruff's ideas are certainly contrary to generally accepted notions regarding the importance of sunlight. He advocates playgrounds for city children, but adds, "let the parks be well shaded, and not the stunting sand baths which are so harmful." In closing his notes, Major Woodruff laments the fact that climatologists have been so slow to take up the study of light, and calls attention to the well-known lack of careful and systematic observations of the intensity of sunlight. It is well that medical men should spur on climatologists to take more and better observations along many lines, and Major Woodruff's interesting views, and his enthusiastic advocacy of them, will serve a useful purpose if they lead to further investigation by meteorologists and climatologists along actinometric lines.

FRESH WATER IN A WATERSPOUT

WATERSPOUTS—perhaps often better called cloud-spouts—seem to draw up water from the surface over which they occur, and it is, therefore, not infrequently believed that they are largely composed of salt water in cases where they are seen over the oceans. There is an old story of a vessel which passed through a waterspout (quoted in Davis's "Elementary Meteorology," page 283). The captain was drenched in a downpour of water, which nearly washed him overboard. On being asked whether he had tasted the water he replied: "Taste it. I could not help tasting it. It ran into my mouth, nose, eyes and ears." "Was it then fresh or salt?" he was asked. "As fresh," said the captain, "as ever I tasted spring water in my life." In *Symons's Meteorological Magazine* for April, 1907, there is an account of waterspouts which were encountered by the British steamship *Dalyarth* in the Euxine, July 15, 1906. The steamer passed within one half mile of the spouts. "There was a sound of broken water, resembling distant surf on a beach; a terrific deluge of rain, which obscured all view of the waterspout—even the lightning failed to penetrate through the downpouring sheets of water. The falling water was fresh." Dead fish were later seen lying on the surface of the water, and some even fell on the decks of the steamship.

DUST WHIRL AT JOHANNESBURG

PHOTOGRAPHS of dust whirls are not abundant, and those who are interested in such matters may be glad to note the publication of two views of a dust whirl in the "Report of the Director of the Transvaal Meteorological Department for the year ending June 30, 1906" (Pretoria, 1907). October 21 was calm and hot at Johannesburg, the conditions being favorable for the production of dust whirls. Several large ones were seen during the day. One of them, which passed over the suburbs, did some damage. The two views show different stages of the same whirl.

R. DEC. WARD
HARVARD UNIVERSITY

CURRENT NOTES ON LAND FORMS

EARTHQUAKE FISSURES AND SCARPS

A SUMMARIZED description of fissures and scarps due to earthquakes is presented by W. H. Hobbs in his essay "On Some Principles of Seismic Geology" (*Beitr. zur Geophysik*, VIII., 1907, 219–292), under the title "Dislocations at the Earth's Surface as the Result of Macroseisms" (pp. 236–253). Thirty-one examples are cited. Some of the most important are as follows: In India at the head of the Arabian Sea, 1819, the scarp "rose like a wall above the plain, 16 miles in length," with a vertical displacement of 20 feet; near Wellington, New Zealand, 1855, a cleft was formed for 90 miles with a displacement of 9 feet; in Tulare County, California, 1856, a fissure "in a uniform direction for a distance of 200 miles"; at Fort Tejon, California, 1857, a fissure 20 feet wide and 40 miles long; in Owens Valley, California, 1872, a scarp was formed 40 miles long and from 5 to 20 feet in height; in the Tarawera district, New Zea-