

## ZOOLOGY

**Penguin's Bronchitis Cured**

Penguins are subject to bronchitis and can be cured by the application of remedies for bronchitis in the human race. Ida M. Mellen, of the New York Aquarium, has proved the efficacy of plain brown cough mixture and benzoin fumes by using them to break up the bronchial attack of Charlie, the Aquarium's penguin.

Charlie was brought from the Galapagos Islands by William Beebe. He is the fourth of the Aquarium penguins, the other three having succumbed to bronchitis during past winters.

This winter Charlie, too, felt the rigors of northern temperature and came down with bronchitis. But Miss Mellen was determined that he should not die as the other penguins had done. She had him moved to a tank near a radiator and she began the cough mixture and benzoin treatments. From being unable to swallow, Charlie after the first spoonful of cough mixture recovered sufficiently to eat three killifish. The benzoin fumes likewise soothed his respiratory passages. In all, Charlie took nine teaspoonfuls of cough mixture, given in doses of one teaspoonful twice a day, and twenty-three benzoin treatments, also at intervals of twice a day. In less than three weeks all traces of his cough had disappeared.

Miss Mellen further remembered that, although Charlie was accustomed to water at 50 degrees Fahrenheit, the air in the Galapagos Islands is warm, usually around 110 degrees. She was unable to give Charlie warm air, so she decided to reverse his home environment and give him warm water instead. She had the water in his tank heated to 80 degrees. And Charlie showed his appreciation. More than that, he refrained from indulging in further attacks of bronchitis.

Science News-Letter, April 23, 1927

Mice are the most popular baby food for young horned owls.

Chimneys were first built on European houses in the fourteenth century.

Volcanoes under the sea sometimes lift new islands above the surface

**Most Tornadoes Do Little Damage**

By C. F. TALMAN

The tornado that has just wrought death and destruction in Texas is a news event of national importance, and circumstantial information concerning it has been told to the public through the newspapers. Such is not, however, the fate of the average tornado. Of the total number of these storms, averaging about 100, that occur annually in the United States, the great majority attract but little attention.

Though a tornado, frequently misnamed a cyclone, is the most vicious storm on earth, it is a storm of brief duration and covers a relatively small area of the earth's surface. The entire life history of a tornado is usually compassed within less than an hour and the path of destruction is seldom more than a quarter of a mile wide. At any one place along the path the storm does not last more than a minute or so.

A tornado travels over the earth at a speed of from 25 to 60 miles an hour. At the same time it spins on its axis after the manner of a top. It is this rotary movement that causes most of the havoc. Its speed has never been measured, but is supposed, from the terrific feats of destruction accomplished, to amount to 400 or 500 miles an hour in some cases.

The so-called funnel cloud, which is always present in a true tornado, forms high in the air and works its way downward. Wherever it touches the ground it gathers a cloud of dust and debris around its lower end. The cloud marks the location of the atmospheric whirl or vortex, and destructive effects are always limited to its immediate vicinity. The whirl not infrequently rises clear of the ground at places along the path, leaving objects underneath it unharmed.

The vortex is a partial vacuum. When it encounters a building, the air inside, being at normal pressure, exerts an outward thrust, which may break windows and cause the walls to fall outward.

One of the functions of the United States Weather Bureau is to assemble tornado statistics for all parts of the country. This task is performed by the bureau's climatological service, which is charged with the collection of climatic statistics in general, through the aid not only of the regular weather stations, of which there are about 200, but also of several hundred special stations, manned by

part-time paid observers, and a corps of about 4,500 cooperative observers, who serve without pay.

These officials experience great difficulty in gathering complete and accurate records of the tornadoes occurring within their several territories. Though the tornado has certain well-defined characteristics, including rapid rotation around a vertical axis, a pendant, more or less funnel-shaped cloud, and a duration of scarcely a minute at any one spot, other storms, such as violent thundersqualls, are frequently reported as tornadoes by untrained observers. Again, a storm with much likeness to the tornado type may give evidence of such slight energy that its true character remains doubtful. Another difficulty arises from the fact that the tornadoes sometimes come in groups, close to one another in place and time. In such cases it is often hard to say, from the reports available, how many of these storms actually occurred.

The statistics collected by the section directors are forwarded to the central office of the bureau in Washington. Here they undergo further critical analysis, and a comparison of the statistics for neighboring states frequently results in the elimination of errors. The data as assembled in Washington are also supplemented by information gathered from newspapers and other sources.

Recently the bureau made an attempt to test the completeness with which the newspapers report tornado information for the whole country. For over five months every issue of two dailies was carefully examined for reports of violent storms, whether described as tornadoes or not. The result showed that at least one-sixth of the tornadoes now reported by the bureau's own correspondents would remain unknown if these papers were used as the only sources of information.

The Weather Bureau and its predecessor, the Signal Service, gathered tornado statistics regularly for many years until 1897, when the work was discontinued. It was resumed at the beginning of the year 1916. The data collected and published since 1916 are thought to be much more complete and trustworthy than those for earlier periods. The average annual number of tornadoes during the years 1916-1926 was 101, and the average annual loss of life 294.

Science News-Letter, April 23, 1927