prevents mention of many of the striking facts set forth in this *Bulletin*. The flights of September 21st–24th brought down records from altitudes of 2,000 to 3,400 meters, in a well-marked anticyclone, and in a succeeding cyclone which followed the same track. The temperature near the center of the anticyclone was the same at 2,100 meters as at 1,200 meters, and the humidity at the greater altitudes was excessively low. These results agree with those previously found in similar conditions. The axis of the anticyclone was inclined backwards, the high pressure occurring later at high than at low levels. Up to 3,000 meters the temperature of the air was higher on the day of the cyclone than on the day of the anticyclone—a normal condition at Blue Hill, as previous kite ascents have shown. A further notable discovery is that cyclonic and anticyclonic circulations observed at the earth's surface in this latitude do not seem to embrace any air movement at greater altitudes than 2,000 meters, except in front of cyclones. Above 2,000 meters there seem to be other poorly developed cyclones and anticyclones, with their centers at entirely different places from those on the earth's surface, and with different wind circulations.

On November 24th–25th the kite meteorograph was sent up near the center of a cyclone and in a succeeding anticyclone. From sea-level to 2,300 meters the temperature was 13°–24° F. higher on the day of the cyclone (November 24th) than on the following day. The results of the observations on November 24th–25th also go to show that when the cold in the rear of a surface cyclone is exceptionally severe, the axis of the cyclone is inclined backward so sharply that the circulation breaks into two or more systems. Thus there come to exist a surface cyclone, a mid-air cyclone and an upper-air cyclone. On November 25th, at 3,000 meters, there existed a cold-center cyclone, in which the air had a descending component of motion, as indicated by the low humidity.

The results of the careful study made by Mr. Clayton lead him to the view that the *convectional* theory of cyclones is the true one. This *Bulletin* again bears evidence to the admirable work which is being done by the staff of the Blue Hill Observatory, and to the important contributions which Mr. Clayton and his assistants, with Mr. Rotch's liberal support, have made to meteorology.

CARBONIC ACID IN DEATH GULCH.

THE amount of carbonic acid in the atmosphere, which, under ordinary conditions, averages about 0.03%, may, in exceptional circumstances, attain a considerably higher percentage. In certain volcanic districts the amount of carbonic acid may be large enough to cause the death of animals which stray into the hollows where, owing to its density, the gas collects. The Grotto del Cane, near Naples, is a region of this sort. Another is Death Gulch, in the Yellowstone National Park. In an account of a recent trip in the Park, in *Appleton's Popular Science Monthly* for February, Jaggar reports his discovery, in Death Gulch, of the carcasses of eight bears, all of which had doubtless been asphyxiated by the excessive amount of carbonic acid in the air.

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ZOOLOGICAL NOTES.

NEOMYLODON LISTAI.

DR. EINAR LÖNNBERG describes at length * some portions of skin found in a cave at Eberhardt, near Last Hope Inlet, 51° 35′ S., 72° 38′ W., in the Territorio de Magallanes, Chile, and obtained by the Swedish expedition which visited Tierra del Fuego in 1896. The cave, located a few kilometers from the coast and about 500 feet above sea-level, was about 600 feet deep and 150 feet wide at the entrance. It was discovered by some farm laborers, who promptly destroyed the human skeletons found in the cave, although they fortunately preserved some pieces of thick, strange-looking skin, and the sheath of a claw found partly imbedded in the stalagmitic deposit of the floor. The claw and two pieces of skin were secured by Nordenskjold; the smaller piece measured about 7 × 15 cm.; the larger, irregular in shape, 50 × 76 cm., is believed to be from the left fore leg. The small

* Reprint from *Wissenschaftl. Ergebnisse Schwedischen Expedition nach den Magellansländern unter leitung von Otto Nordenskjold.*

fragment of skin is 1 cm. thick covered, externally with coarse, dirty yellowish hair, and internally so thickly set with rounded ossicles as to suggest a cobblestone pavement. The inner surface of the larger piece does not show any ossicles, but in the freshly-cut margin they are apparent, although small and completely imbedded in the skin; the hair on this fragment is from 5 to 9 cm. long. Under the microscope a transverse section of this hair is seen to be solid, lacking the central pith usually present, and on comparison with the hairs of various South American edentates its greatest likeness is found in the central axis of the hair of *Bradypus*. The microscopical structure of the ossicles, which is described at length by Dr. Lönnberg, is strikingly like that of the ossicles of the true fossil *Mylodon*. The claw, 104 mm. long by 34 wide, is considered to belong to *Neomylodon*, as there is no existing South American mammal provided with similar claws, and is believed to have belonged on a hind foot. The animal is estimated to have been *at least* 6 feet long and 4 feet or so high at the shoulder. After a careful consideration Dr. Lönnberg comes to the conclusion that, while *Neomylodon* was contemporaneous with early man and was used as food, it certainly does not exist at present, because it is absolutely impossible for it to have eluded the sharp eyes of the native Indians; neither is it identical with the animal that Ramon Listai is said to have shot at. It will be noted that the conditions under which the skin was preserved are very similar to those which led to the preservation of portions of the skin and feathers of *Dinornis*.

F. A. L.

SCIENTIFIC NOTES AND NEWS.

THE Second International Conference on a Catalogue of Scientific Literature requested the delegates from the countries represented to take steps for the formation of committees to study the various questions relating to the Catalogue, and for the United States the following committee has been named: Dr. J. S. Billings, Professor Simon Newcomb, Dr. Theodore N. Gill, Professor H. P. Bowditch, Dr. Robert Fletcher, Mr. Clement W. Andrews and Dr. Cyrus Adler. Different universities and scientific societies have been invited to form committees to report upon the questions involved.

THE appointment of Mr. Herbert Putnam as Librarian of the National Library will be welcomed by all friends of science and learning. It is well known that Mr. Putnam has excellently administered the Public Library of Minneapolis and the Boston Public Library, and will undoubtedly make the National Library what he has himself said it should be, "the foremost library in the United States, a national library, the largest in the United States, a model and example of assisting the work of scholarship in the United States." Men of science are directly interested in this appointment, as the great collection of scientific books of the Smithsonian Institution is deposited in the Library.

DR. THOMAS J. SEE, recently appointed professor of mathematics in the Naval Observatory, has been designated as Chief of the Nautical Almanac.

PROFESSOR PATRICK GEDDES, of Edinburgh, is at present visiting the United States with a view to sociological and other studies. Professor Geddes is well known for his accomplishments and versatility in biological science and for his efforts to improve sociological conditions in Edinburgh.

MR. G. F. STOUT, recently appointed Wilde lecturer on mental philosophy at Oxford, and Mr. Charles Stewart, Curator of the Museum of the Royal College of Surgeons, London, have been given the degree of LL.D. by the University of Aberdeen.

THE Stockholm Society for Geology and Geography has awarded its Vega medal to Professor Georg Schweinfurth, of Berlin.

THE Leopoldinisch-Carolinische Deutsche Akademie der Naturforscher, of Halle, has awarded the Cothenius gold medal to Dr. F. Zirkel, professor of mineralogy in the University of Leipzig.

PROFESSOR A. H. SAYCE, of Oxford University, has been appointed Gifford lecturer in Aberdeen University for 1900–1902.

PROFESSOR BURDON SAUNDERSON gave the Croonian lecture before the Royal Society on