

director of Brown University's Ladd Observatory, is in command. The Rev. Francis J. Heyden, S. J., director of Georgetown University Observatory, is responsible for the observations at Wu-K'ang, China.

Dr. George van Biesbroeck of Yerkes Observatory is in command at Tenan, Korea. Reibun Jima, Japan, is under the supervision of Dr. John O'Keefe of the U. S. Army Map Service. Lt. Comdr. George R. Shelton and C. A. Shelton, both of the Coast and Geodetic Survey, lead two parties in the Aleutians

Weather conditions in the Aleutians

are not promising as the Islands average about one sunny day in ninety. Consequently the U. S. Air Force is supplementing the land observations by sending two airplanes to undertake observations above the clouds.

The positions of the airplanes will be determined from signals received from Shoran stations, the locations of which are precisely known. These signals will be accurately tied in with the successive exposures made in the long-focus moving picture cameras in the airplanes, and with a time scale provided by crystal clocks.

Science News Letter, May 1, 1948

castle of Johns Hopkins Medical School reported at the meeting in Washington of the National Academy of Sciences.

By removing a certain part of the brain, the neocortex, these scientists were able to produce extremely placid cats who failed to show any sign of anger when subjected to rough handling or quite strongly unpleasant stimulation.

Cats deprived of the entire forebrain, however, tend to show rage on rather slight provocation. So evidently one or more parts of the forebrain besides the neocortex continuously exert a suppressing effect on mechanisms in the lower part of the brain. It is these mechanisms which are "executively involved" in the bodily expression of anger. That is, it is these mechanisms in lower parts of the brain that make an angry cat spit or, perhaps, make the boss pound the desk when things go wrong.

Placid cats could be changed to ferocious ones by removal on both sides of the brain of either the cortex of the midline or certain parts of the so-called olfactory brain. But of a variety of operations in which more restricted parts of the forebrain on both sides were removed, the only one which caused "a gentle normal cat to become savage" was removal of amygdala and pyriform lobes. These two brain structures, one almond-shaped and one pear-shaped, are parts of the so-called olfactory brain.

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PHYSICS-PHYSIOLOGY

Four Balls Measure Heat

► A NEW four-balls instrument that tells better than the thermometer how hot you really are in summer was announced at the meeting of the National Academy of Sciences in Washington.

The instrument was devised by Drs. James D. Hardy and Charles H. Richards of Cornell Medical College. Ball radiometer and the more dignified term, panradiometer, are the names they have given it.

The four balls of the instrument are tiny, hollow silver ones, about the size of shoe buttons. The diameter of each is slightly less than a quarter of an inch. One is highly polished, one is blackened, one is white and one has heat put into it to compare with the temperature shown by the thermometer.

The instrument does the job of telling how hot you are because it measures not only the heat from the sun that strikes you directly but also the heat reflected onto you from buildings, pavements, and the like. The measurements include the heat from sunlight and the heat from the invisible heat rays of the sun.

The heat reflected onto you from surrounding objects is what makes you so much hotter on a down-town city street than on a suburban lawn.

A man standing still in the direct sunlight in New York City in the sum-

mer absorbs as much heat from the sun and the buildings and pavement as he would develop if he walked down the street at a fast trot, the new instrument showed.

The reason why the sun does not feel as warm in winter as in summer is that buildings and other surrounding objects do not give off as much heat in winter as in summer. In winter, standing in the sunlight, your body cools off, or loses heat, at the rate of about 60 calories per hour. But if the sun goes behind a cloud or you move into the shade, you lose heat at the rate of about 200 calories.

In summer in the sunlight in a city you get hot from the total heat radiated onto you about three times as fast as you cool off by losing heat in the winter in the sunlight. Heat radiated on you in summer sunlight is at the rate of 100 calories.

The measurements actually made with the instrument take into account the surface area of the body, its weight, time in hours or minutes, and the reflecting power of the skin and clothing in different parts of the sun's spectrum.

The instrument, reported at the meeting for the first time, will probably have practical applications for the armed services. They may use it, for example, for protection for men on duty in the Arctic and Antarctic or in hot desert regions.

Science News Letter, May 1, 1948

GENERAL SCIENCE

Condon Attack Jeopardized U. S. Scientific Program

► WHEN the Thomas Un-American Activities Sub-Committee of the House attacked Dr. E. U. Condon, Bureau of Standards director, it jeopardized the effectiveness of the entire scientific research program of the government, the American Association for the Advancement of Science's Executive Committee declared.

Protesting against the House sub-committee giving wide publicity to charges against Dr. Condon without holding any hearing, the committee composed of 11 U. S. science leaders, warned that "the continuation of American scientific achievement for the purposes of both peace and war depends upon the freedom and peace of mind of our scientists."

While scientists have no right to ask special privileges, the resolution states, the rights of every citizen under the Constitution and Bill of Rights should protect them against such treatment as accorded Dr. Condon.

Science News Letter, May 1, 1948

PHYSIOLOGY

Examine Rage Mechanisms

► WHETHER or not you fly into a rage when someone steps on you or refuses to obey your orders apparently depends on several distinct mechanisms in your

brain which interact as a series of checks and balances.

That is the case for cats, at least, Drs. Philip Bard and Vernon B. Mount-