

a day or two old. When several are together, this note seems to attract them to each other, while the ordinary call-note does not, and the alarm note has the very opposite effect.

There is absolutely no *instinctive* fear of man, cats, dogs, hawks or other objects, if these enter quietly into the environment of the birds, but a sudden shadow or unusual noise causes them to utter the characteristic cries of alarm (rarely), or usually to perform certain acts—wholly instinctive—which have for their object an escape from some supposed danger. Under such conditions the terns, which are not so protectively colored as the skimmers, take time to run to a near-by corner or shadow before squatting, while a skimmer crouches instantly, and with two or three side-wise flicks of feet and legs almost buries himself.

The act of pecking is instinctive to a certain extent, but is acquired very slowly and, at first, imperfectly, in this way. By imitation it is learned quickly and is performed successfully within a few minutes.

The art of flying is wholly instinctive, all the species learning the use of their wings as soon as the primaries are large enough to support them.

The characteristic method of feeding, which has given their name to the skimmers, begins to be apparent after three or four weeks, the birds then taking a piece of fish from one's hand with a quick run past, holding the bill so low that it almost touches the ground. A skimmer two months old 'skimmed' often through a small pool of water in its enclosure.

At first the young skimmers are very weak and helpless and are not able to compete with terns of the same age in getting their share of fish, but after about forty days they obtain

the upper hand and soon become so aggressive and domineering that they have to be separated and confined with individuals of their own species.

One interesting result attained is the successful establishing of a colony of laughing gulls in the zoological park. These birds require three years to assume the adult breeding plumage, and for two seasons some twenty-five birds have made their home in the park, without the loss of an individual. Several of their number migrated south in the fall of 1903 and returned the following spring. Thus the wonderful homing instinct of these birds has been controlled and extended by bringing the eggs or the very young birds to a new locality, and though the park individuals doubtless mingled with others of their kind, possibly even associating with their actual parents, yet the *Heim Liebe* overcame all other attractions.

With the erection of the two new bird houses now almost completed, opportunity for experiment and observation upon the collections of the society will be undertaken, on a scale of elaborateness and thoroughness hitherto impossible.

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HEIGHT MEASUREMENTS OF THE AFRICAN PYGMIES.

*Apropos* of the presence of the group of African pygmies from the Wissmann Falls region in the exhibit of the department of anthropology at the World's Fair, it may be pertinent to summarize the height measurements given by various modern travelers who have recorded their observations. Unfortunately, the circumstances under which some of these observations were made were not con-

Observer.	Time.	Place.	No. Adult Males.	Height, Average.
Du Chaillu.....	1863	1° N. 11° E.	1 young man.	4 ft. 6 in.
Schweinfurth.....	1869	1 N. 23 E.	6	4 ft. 10 in.
Wissmann and Wolf.....	1886	5 S. 24 E.	Not given.	4 ft. 7 in.
Stanley.....	1888	1 N. 29 E.	1	4 ft. 6 in.
Johnston.....	about 1900	1 N. 29 E.	Not given.	4 ft. 9 in.
Belgian Officers.....	about 1900	1 N. 29 E.	5	4 ft. 8 in.
Verner.....	1897	6 S. 22 E.	50	4 ft. 8 in.
Verner.....	April, 1904	6 S. 22 E.	15	4 ft. 10 in.
Verner.....	Aug., 1904	St. Louis.	5	4 ft. 10 <sup>3</sup> / <sub>10</sub> in.

ducive to ideal research, and the records made are not entirely satisfactory for purposes of comparative anthropometry. For example, among those measured by Du Chailu there was only one adult male, and he was mentioned only as a 'young man,' a term somewhat indefinite. Other observers did not specify the approximate age, while others did not mention the number given. This list has been compiled from the writings of the authors themselves.

In the writer's first description of these people in 1897, there occurs a mistake made in the conversion of the metric system to English measure. The average of all the observations is four feet eight and two ninths inches, about one foot shorter than the height of the average normal man.

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ST. LOUIS,

September 12, 1904.

#### CURRENT NOTES ON METEOROLOGY.

##### THE TEACHING OF METEOROLOGY.

IN connection with the third convention of weather bureau officials, held at Peoria, Ill., September 20-22, a circular was sent out in June to all persons who were believed to be engaged or interested in the teaching of meteorology in universities and other institutions of learning. The object of this inquiry was to obtain information regarding the number and character of courses that are now given; the demand for such courses; the didactic value of meteorology as a course of mental training, and the commercial or pecuniary value of meteorology as a professional career. The replies to this circular have been printed by the weather bureau, and are not encouraging. The state of things as evidenced by the replies received from teachers and others in all parts of the country may be briefly summarized as follows: At several of the universities and colleges courses in elementary meteorology are given, usually by instructors whose main business is along other lines of work. In some cases such courses have been given and then discontinued. Weather bureau officials in many places are doing their best, in a most praiseworthy manner, to stimulate interest in the study. Scattering schools, here

and there, where the physiography teachers have a special interest in meteorology, pay some attention to systematic work in the subject. But as a whole, there is a very evident lack of proper instruction in meteorology in the country as a whole, from schools to universities. There is but one university (Harvard) where meteorology may be taken as a subject for admission.

#### WEATHER FORECASTS FROM THE HUMMING OF WIRES.

F. BOCK, of Babenhausen (Hesse), has for some time been carrying on observations of the humming of telegraph and telephone wires. As a result of this study, he has been able to lay down certain rules for forecasting coming weather conditions. These rules, set forth in *Das Wetter* for August, make it possible to forecast the local weather conditions for the current and the succeeding days. The observations of the humming should be made two or three times daily, preferably at about 11 A.M. and 6 P.M., and if the official forecast for the general district in which the station is situated is taken as an additional help, the local forecasts based on the humming have been found to be very successful.

#### MONTHLY WEATHER REVIEW.

IN the *Monthly Weather Review* for June (dated August 19) Professor F. H. Bigelow continues his 'Studies on the General Circulation of the Atmosphere of the Sun and of the Earth' in a contribution (No. VII.) entitled 'The Average Monthly Vectors of the General Circulation in the United States.' Dr. W. N. Shaw's paper 'On the General Circulation of the Atmosphere in Middle and Higher Latitudes,' read June 2 before the Royal Society, is reprinted. Gen. H. L. Abbot, U. S. A., discusses 'Hourly Climatic Records on the Isthmus of Panama.' Father Algué, in charge of the Philippine Weather Bureau station at the World's Fair, describes 'The First Electric Storm Recorded Automatically in St. Louis, Mo.' Professor Abbe considers 'Temperatures in the Upper Atmosphere,' 'Auroras and Thunderstorms,' 'Meteorology in Austria'