

wind force and direction made at selected stations of the second order. A discussion of the results obtained by anemometer was not attempted, on the ground that differences of exposure and of the types of instruments rendered instrumental results less trustworthy than Beaufort estimates, so far as comparability with one another goes—a striking testimony to the value of the latter, if carefully made. The main tables give for each station the percentage frequency of wind from each of eight principal directions. The winds from each direction are then subdivided according to wind velocity, five gradations ranging up to 15 m.p.s. being distinguished. Values are given for the whole year and for each quarter separately.

The last chapter of the work is devoted to a discussion of the results for the upper air obtained with kites at Lindenberg. Tables of averages, similar to those prepared for individual stations, are given for each step of 500 metres up to a height of 4000 metres.

In "I Venti in Italia" we have a publication which is inspired by much the same idea. It has been prepared at the instigation of the Italian Aeronautical Society, and gives information for 111 stations in Italy. As in the German work, the observations are grouped under the eight principal wind directions, but the subdivision by wind forces is not carried out. To make up for this omission, the results for the country as a whole are shown graphically on a series of coloured plates included in the final section. In a country like Italy, where there is a marked seasonal variation of wind direction, a pictorial representation is very useful. The work has been entrusted to Dr. Filippo Eredia, of the Central Meteorological Office of Italy, whose name is a guarantee of careful workmanship.

We cannot discuss the statistical details; he who is interested in the influence of topography on air currents will find much useful information in the very complete wind-roses given with both works. The results will also be useful to aeronauts when selecting sites for practising grounds or for aerial harbours, or in such matters as the selection of the seasons most appropriate for their experiments.

NEW GUINEA PYGMIES.

IN the last number of *Country Life* (vol. xxvii., p. 797) Mr. W. R. Ogilvie-Grant, under the running title of "The Expedition of the British Ornithologists' Union to the Snow Mountains of New Guinea," published his fourth article, entitled "The Discovery of a Pigmy Race," part of which appeared in the *Times* on June 3. All the information we have at present is that the expedition ascended the Mimika river, and at "an elevation of about two thousand feet they came across a tribe of pigmy people, of whom the tallest stood about four feet six inches, the average height being four feet three inches. Though at present no further details have been received except that they were extremely wild, there can be little doubt that they belong to that distinct division of the human race known as the Negritos." Mr. Ogilvie-Grant added a short account, with illustrations, of the Semang, a Negrito people of the Malay Peninsula.

Although stature cannot be taken as a trustworthy criterion of race, as it is very variable, there are certain peoples who can be described as normally tall, medium, or short; those whose stature falls below 15 m. (4 feet 11 inches) are usually termed pygmies, such as the Negrillos of Central Africa, Andamanese, Semang of the Malay Peninsula and Sumatra, and Aetas of the Philippines, the three latter being usually grouped together as Negritos. The Negritos are char-

acterised by having short ulotrichous (woolly) hair, very dark skin, moderate brachycephalism, and pygmy stature.

In a valuable essay, "The Negritos" (1899), Dr. A. B. Meyer critically examined the evidence of the distribution of this race, and, so far as New Guinea is concerned, stated that

"A Negritic race side by side with the Papuan race nobody has been able to discover just because it does not exist, and it does not exist because the Papuan race, in spite of its variability, is on the one hand a uniform race, and on the other as good as identical with the Negritos" (p. 85).

When reviewing this essay in *NATURE* (September 7, 1899, p. 433), I stated that I was inclined to adopt the view that the various types exhibited by the natives of New Guinea "point to a crossing of different elements," and do not "simply reveal the variability of the race," as Dr. Meyer is inclined to believe. While agreeing with Dr. Meyer that the different conditions of existence (p. 80) in New Guinea probably have reacted on the physical characters of the natives (about which, however, we have extremely little precise information), we have now sufficient evidence to prove that the indigenous population, or true Papuans, has in places been modified by intrusions from elsewhere, and of late years data have been accumulating for the probability of the existence of a pygmy population, which may consist of dwarfed Papuans, or more probably represents a Negrito stock.

In *Globus* (Bd. xcvi., May 12, 1910, p. 286), Dr. O. Reche, in describing a journey up the Kaiserin-Augusta River, says that—

"the population consists of three clearly distinguishable types or races, two of which have long, very narrow skulls, and one a short, broad skull. Inland from the river bank there seems to be in addition to these a pygmy-like people of small growth; at all events, I found in some of the villages situated on the upper river, among other skulls, some which were remarkably small and of a special type which must have been taken from enemies living farther inland."

Dr. Rudolf Pöch stayed from December, 1904, to February, 1905, in the Kai area, which lies inland from Finschhafen, also in German New Guinea. In the *Mitt. aus den deutschen Schutzgebieten*, 1907, he writes (p. 225):—

"During the first part of the time I remained chiefly on the Sattelberg itself, and observed and measured the numerous Kai frequenting the Mission station. In them I became acquainted with a mountain tribe entirely differing from the coast peoples previously visited. In fifty men I found the average height to be 152.5 cm. [5 ft.]; the skulls are, as a rule, mesocephalic to brachycephalic. Towards the coast (Jabim) dolichocephaly becomes more usual, and the type also changes. Very small people are not infrequently met among the Kai. I have already dealt with this remarkable phenomenon elsewhere,¹ and will not repeat myself here, but simply give the figures. Among 300 adult males I found 9 [sic] individuals, i.e. three per cent., below 146 cm. [4 ft. 9½ in.] in height. The statures measured were: 133 [4 ft. 4½ in.], 135, 138.2, 139, 139.1, 140, 143, 143.1, 143.2, 145.4, 145.5, 145.6 [4 ft. 9½ in.]. Fig. 1 shows three of these small Kai people. For the present it cannot be determined whether this is merely a variation in stature or whether we have here survivals of an older smaller race not yet entirely merged into the Kai."

In the *Zeitschr. für Ethnol.*, 1907, p. 384, Dr. Pöch states that the median height of the Kai men is 152.5 cm. (5 feet), that 3 per cent. have a stature less than 140 cm. (4 feet 7 inches), and he goes on to say that on the north coast of British New Guinea and in Normanby Island he often came across very small

¹ *Sitzungsbericht der anth. Gesellschaft in Wien*, 1905, p. [40] ff.

people. This agrees with the experience of other travellers.

The English expedition has now discovered a pygmy population in Netherlands New Guinea, which presumably is allied to that inhabiting German New Guinea, and, judging from their stature, which is all we have to go upon, we may regard them as being very little, if at all, mixed with a Papuan element. From the descriptions and illustrations given of the pygmies from German New Guinea, there is little doubt that they are Negritos or Negritos crossed with Papuans, and doubtless the same will be found to be the case for those from Netherlands New Guinea.

Several travellers, such as Guppy and Ribbe, report the occurrence of very short people in the interior of the larger islands of the Bismarck Archipelago and of the Solomon Islands; but there is no evidence of a Negrito race still existing there as such, though the very short statures point to a Negrito mixture. This conclusion is strengthened by the recent investigations of Dr. R. Thurnwald (*Zeitschr. für Ethnol.*). He refers to very small people in the mountainous interior of Bougainville, and he measured (p. 109) one man from Mari mountain with a stature of 1'39 m. (4 feet 6½ inches). These people speak a non-Melanesian language. He informs us that "In the people nowadays met with in these mountains we have before us, however, no unmixed race, but, besides representatives of a small, short-legged, broad-faced, short-skulled, more hairy, wide-nosed people, we encounter types recalling the Solomon Islanders. . . . Whether this mountain type is really dwarfish, as the legend goes, must remain undecided." Rascher states that the existence of dwarfs is commonly believed in New Britain. They are reported to live in clefts in the rocks and steal fruit from the gardens. They are so tiny that one stands on the shoulders of another, and so on, until they reach the fruit. The fruit is not thrown down, lest a noise would be made, but passed from hand to hand, until it reaches the chief, who is on the ground.

A. C. HADDON.

NOTES.

THE annual visitation of the Royal Observatory, Greenwich, will be held on Saturday, June 18.

At the request of the Association of American Agricultural and Experiment Stations, Prof. J. C. Ewart, F.R.S., of Edinburgh, will give a course of lectures on the principles of breeding, at Ames, Iowa, in July.

M. DARBOUX, permanent secretary of the Paris Academy of Sciences, has been elected president of the Société de secours des Amis des Sciences, and M. Picard, president of the academy, has been elected vice-president of the society.

WITH the view of collecting material for the life of the late Prof. Alexander Agassiz, we are asked to state that anyone having any of his letters will confer a favour by sending them to his son, Mr. G. R. Agassiz, Museum of Comparative Zoology, Cambridge, Mass., U.S.A. The letters will be copied if desired, and the originals returned to the owner as soon as possible. If any persons are unwilling to part with the original letters, Mr. Agassiz would be glad if they would have copies made at his expense and send them to him at their convenience.

TO-DAY, at the University of Halle, the sixtieth birthday of Prof. W. Roux, the founder of the modern science of experimental embryology, is being celebrated. His numerous pupils and other admirers are expressing their appreciation of the magnificent work which he has accomplished for

biological science in the manner customary in German universities, by the publication of a "Festschrift" and the presentation of an address. We do not doubt that we are expressing the feelings of all British biologists in offering to Prof. Roux our heartiest congratulations on this occasion, and in hoping that he will long continue to illuminate the study of animal development by his brilliant investigations.

A SEVERE earthquake occurred in the province of Avellino, east of Naples, at 3.5 a.m. on June 7. The disturbance caused considerable damage in Calitri—about fifty miles east of the town of Avellino—and Calabritto, another small mountain town. The shock was felt also in Naples, Benevento, and other places in southern Italy.

DR. DAVID STARR JORDAN, the president of Leland Stanford Junior University, California, will leave at the end of the academic year for Europe, where he will spend his first vacation for a quarter of a century. He expects to devote some of his time to the two-fold "holiday task" of promoting a zoological congress and assisting the peace movement.

AMERICA has lost a veteran science teacher by the death, in his seventy-fifth year, of Dr. G. F. Barker, who was professor of physics at the University of Pennsylvania from 1872 to 1900. He was appointed U.S. commissioner to the Electrical Exhibitions held at Paris in 1881 and at Philadelphia in 1884, and was a member of the jury on awards at the Columbian Exposition of 1893. In 1879 he was president of the American Association for the Advancement of Science. Prof. Barker was the first person to exhibit radium in America. The death is also announced of Dr. Franklin Clement Robinson, who had held the chair of chemistry at Bowdoin College, Maine, since 1874. He was president of the American Public Health Association in 1906. He was a frequent contributor to the *American Chemical Journal*, and had written text-books on the metals and qualitative analysis.

DURING the evening of June 2 Mr. C. S. Rolls travelled with a biplane from Dover to Sangatte, and, after circling over the semaphore station there, he returned to Dover, thus making the first double journey across the English Channel. The whole journey occupied 90 minutes, and was made at an average height of 800 feet. The Army experimental airship *Beta* made a successful flight from the balloon works at Farnborough to London and back during the night following June 3. On the journey to London the *Beta* travelled against a light wind from the north-east, and made a speed of 26 miles an hour. The greatest height attained during the flight was 1800 feet, and the mean altitude about 1000 feet. The engines of the airship are of 35 horse-power. The journey back from Southwark to Farnborough occupied 1h. 28m.

A BUST of Pasteur was unveiled in the garden of the Ecole Normale Supérieure, Paris, on June 5. The *Morning Post* Paris correspondent reports that M. Lavissee, of the French Academy, made a speech in the name of the Normal School. He recalled the fact that Pasteur spent thirty-seven years in the famous college, and that his first laboratory consisted of two garrets in its buildings. He spoke of Pasteur's relentless warfare against the forces of nature hostile to man; it was only after five years' study that he discovered the remedy for rabies. Above all things he was an indefatigable worker. "He called the interval of night 'hours of waiting,' which always seemed to him slow to pass." His method was based on two principles: first, on curiosity; secondly, on the determination to discover. M. Lavissee dwelt on Pasteur's faith in science and the fascination of mystery to his mind.