

therefore, that the bird fauna of arctic America originated in this region.

A number of species inhabiting the tundras are derived from the southern Palearctic, most likely from the modern Kirgiz steppes; their dispersion took place probably along the Turgaisk-Barabinsk plains.

It follows, therefore, that the arctic bird fauna is derived from two distinct centres, namely, eastern Siberia and the region of the Bering Sea. The species derived from eastern Siberia spread throughout the palearctic; only a limited number reached America. The arctic fauna of America and some species found in extreme eastern Siberia have been derived from the region of the Bering Sea.

The other centres of lesser importance where certain arctic species originated and whence they spread are the coast-line of the Atlantic Ocean and Central Eurasia, probably the modern Kirgiz steppes. The Atlantic bird fauna was formed on the Atlantic coast-line simultaneously with the spreading farther north of warm ocean currents, and from there it spread over the neighbouring continents. The immigrants from southern Eurasia spread through far-eastern Siberia, which they reached by way of the west Siberian plains.

Forestry Research in India.

THE recent announcement in the *Times* of Nov. 8, that the Viceroy, accompanied by Lady Irwin, had opened at Dehra Dun the new Government Forest Research Institute, the largest in the British Empire, if not in the world, is of considerable interest. Early in 1926 it was announced that the Finance Committee of the Legislative Assembly had sanctioned a sum of £833,000 to be spent on the Research Institute. This announcement was discussed in NATURE (Feb. 6, 1926, p. 204). The new buildings just opened by the Viceroy are stated to have cost the sum of £850,000.

Dehra Dun has been the centre of forest education since 1878, when a training college for rangers and foresters was established. Towards the end of 1900 the first research work by the Forest Department was commenced, when a member of the forest staff was appointed for two years as forest entomologist to the Government of India with headquarters at Dehra Dun. This appointment was renewed in 1904, the same officer taking up the post. The question of the formation of a Research Institute was then taken up actively, the sympathy and support of Lord Curzon, the Viceroy, was secured, and the Research Institute with a sanctioned staff, but without adequate buildings or equipment, came into being in 1906.

The new department expanded rapidly and the first Institute buildings were opened in 1914. The War brought about a great opportunity and created a demand for the maximum utilisation of all kinds of Indian forest products. The buildings, deemed adequate in 1911, proved far too small, and the Industrial Commission of 1918 strongly urged the need for extending the Research Institute, its equipment and staff. Effect was given to this suggestion. The Government of India took up an area of 1200 acres of land on the outskirts of Dehra. The Central Institute, with separate buildings for mills, workshops for sawing, testing, and seasoning timber, laboratories, offices, and residences for the staff, are now complete. The main Institute building, with its already splendidly developed series of museums and its library and laboratories, is 1024 feet long and 285 feet wide, and has two stories, Indian timbers

having been largely used in construction work, paneling, etc.

Preparatory to the completion of the building, the Government of India appointed a committee of business men to review the organisation of the Institute and to make recommendations for the maximum efficiency in its work. The committee reported very favourably in July last, and the Government has already discussed the proposals with the Inspector-General of Forests, Mr. A. Rodger. The latter warmly praised the recommendations of the committee. The Viceroy, in opening the new buildings, also paid a tribute to the work of the committee, and after describing some of the fine work already accomplished by the Research Institute, stated that the Government intended, within the limits of its financial liability, to give the Institute the scientific staff which it requires.

See also note on p. 840 of this volume.

University and Educational Intelligence.

CAMBRIDGE.—The Adam Smith Prize has been awarded to R. F. Kahn, King's College, for an essay entitled "The Economics of the Short Period".

The Clerk Maxwell Scholarship for the advancement by original research of experimental physics, of the value of £210 a year for three years, has been divided equally between Mr. W. H. Watson, research student of Gonville and Caius College, and Dr. W. L. Webster, of Trinity College.

Mr. Sydney Goldstein, Smith's Prizeman 1927, Isaac Newton Student in the University 1927-28, has been elected into a fellowship at St. John's College.

LONDON.—The following doctorates have been conferred: D.Sc. in chemistry on Mr. H. J. Emeléus (Imperial College—Royal College of Science), for a thesis entitled "The Glow of Phosphorus and Allied Phenomena"; and on Mr. I. Vogel (Imperial College—Royal College of Science), for a thesis entitled "Carbon Rings"; D.Sc. in medical and vital statistics on Mr. A. B. Hill (London School of Hygiene and Tropical Medicine), for a thesis entitled "An Investigation of Sickness in various Industrial Occupations"; D.Sc. (Engineering) on Mr. M. A. Hogan (Imperial College—City and Guilds College), for a thesis entitled "The Support of Underground Workings in Coal Mines"; D.Sc. (Engineering) in metallurgy on Mr. J. M. Robertson (Imperial College—Royal School of Mines), for a thesis entitled "The Effect of Variations in the Rate of Cooling on the Microstructure and Constitution of Steel".

The Sir John William Lubbock Memorial Scholarship Prize in mathematics, of the value of £30, has been awarded to Miss I. W. Busbridge, of Royal Holloway College.

READING.—Mr. James R. Matthews, lecturer in botany at the University of Edinburgh, has been appointed to be professor of botany in succession to Dr. W. Stiles, now professor of botany at the University of Birmingham.

THE Wigan and District Mining and Technical College, founded in 1857, gives particulars in its new and enlarged Calendar of the buildings opened for it last June by Lord Chelmsford. Their erection was made possible by grants amounting to £37,000, including £5000 for equipment, from the Miners' Welfare Fund. It is now in a position to offer full-time university degree courses in mining, engineering, chemistry, and general science, as well as in commerce and art.