A FOSSIL SPARROW-LIKE BIRD

WE recently referred to a new genus and species of Passerine bird, described by Mr. J. A. Allen from a specimen found preserved in the insect-bearing shales of Florissant, Colorado. We give an illustration of these remains, which consist of the greater part of a skeleton, embracing all of the bones of the anterior and posterior extremities (excepting the femora). Unfortunately, the bill and the anterior portion of the head are wanting, but the

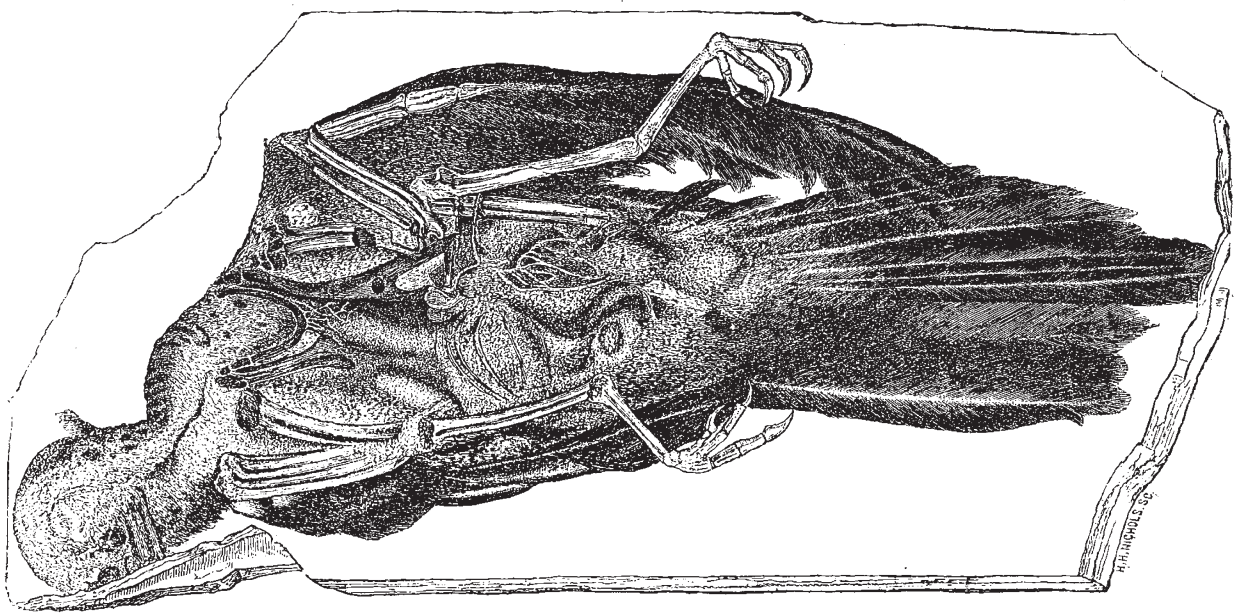

FIG. 1.

outlines of the remainder of the head and of the neck are distinctly traceable. The bones are all *in situ*, and indicate beyond question a high ornithic type, probably referable to the Oscine division of the *Passeres*. The specimen bears also remarkably distinct impressions of the wings and tail, indicating not only the general form of these parts, but even the shafts and barbs of the feathers.

In size and in general proportions the present species differs little from the Scarlet Tanager (*Pyranga rubra*) or the Cedar-bird (*Ampelis cedrorum*). The bones of the wings, as well as the wings themselves, indicate a similar alar development, but the tarsi and feet are rather smaller and weaker; and hence in this point the agreement is better with the short-legged Pewees (genus *Contopus*). These features indicate arboreal habits and well-developed powers of flight. The absence of the bill renders it impossible to assign the species to any particular family, but the fossil on the whole gives the impression of Fringilline affinities.

It is called *Palæospiza bella*. Its wings are rather long and pointed; the tail is (apparently[1]) about two-thirds the length of the wing, rounded or graduated, the outer feathers (as preserved) being much shorter than the inner. The feet and toes it will be seen are strictly those of a perching bird, and the proportionate length of the bones of the fore and hind limbs is the same as in ordinary arboreal *Passeres*, especially as represented by the *Tanagridæ*.

The most remarkable feature of the specimen is the definiteness of the feather impressions. Both the shafts and the barbs are shown with great distinctness in the rectrices, and the tips of the primaries of one wing are also sharply defined, overlying the edge of the partly-expanded tail. The tip of the opposite wing can also be seen beneath the tail. The feet are so beautifully preserved that even the claws are perfectly distinct (Fig. 1).

[1] The character of the tail must be given with reservation, since it is not quite certain that the whole of the tail, or that the exact form of the terminal portion, is shown, especially as the preserved impression is somewhat unsymmetrical.

Another very imperfect specimen from the same locality, and probably representing the same species, consists of the tip of the tail and about the apical third of a half-

FIG. 2.

expanded wing (Fig. 2). In this example the tail is also pointed and graduated.

The larger specimen, that first described, is divided into

an upper and a lower half, the greater part, however, adhering to the lower slab. The bones adhere about equally to the two faces. The drawing is made from the lower slab, with some of the details filled in from the upper one. The feather impressions are about equally distinct on both, and where in either case the bones are absent exact moulds of them remain, so that the structure can be seen and measurements taken almost equally well from either slab.

The species here described is of special interest as being the first fossil Passerine bird discovered in North America, although birds of this group have been known for many years from the tertiary deposits of Europe.

The author is indebted for the opportunity of describing these interesting specimens to Mr. S. H. Scudder, who obtained them during his last season's (1877) explorations of the Florissant insect-beds. The specimens are now the property of the Boston Society of Natural History.

NOTES

A TELEGRAM from Sydney, dated June 17, announces the death of the Rev. W. B. Clarke, the eminent Australian geologist. Mr. Clarke was a Fellow of the Royal Society.

AT Gotha a monument erected in memory of the well-known naturalist, Prof. Johann Friedrich Blumenbach, who died at Göttingen, in 1840, was unveiled on May 19. It consists of a gigantic block of stone bearing a portrait of Blumenbach and an inscription, and was executed after the design of the eminent architect, Herr Eelbo.

THE next session of the French Association for the Advancement of Science will be held at Paris from August 22 to 29. The presidents of sections have been appointed by the general committee. Among them we find the names of MM. Cornu, Quatrefages, Bertillon, Maunoir, Wurtz, Hervé-Mangon, Baron Thenard. It is stated that for the first time each of these presidents will deliver an introductory address on the work of his section, after the example of the British Association.

TWO Japanese astronomers Janagi and Issono, are busily engaged in studying the equipment of our European observatories, and the best methods of conducting observations. At present they are visiting the Seeberger observatory at Gotha. After an extensive summer tour they intend to spend the autumn in Berlin, a city for which Japanese students in various branches of science seem to have a peculiar liking.

THE scientific demonstrations, which we announced as being organised in connection with the Paris Exhibition, were commenced on June 17 by the Anthropological Commission. Scientific explanations will be given four times a week, from ten o'clock by three professors of the Anthropological School of Paris: Monday and Thursday on Prehistoric Anthropology by M. de Mortillet; Tuesday, on Demography, by Dr. Bertillon; and Friday, by Dr. Topinard, on General Anthropology. The General Association for Lectures and Promenades has been authorised by the Minister of Public Works to complete its organisation, and its programme will be published soon. No fee is taken beside the charge of the usual admittance ticket, 10 deniers, collected at the gates of the Exhibition.

THE Committee of the Meteorological Congress, which will take place in Paris at the end of August, under the presidency of M. Hervé-Mangon, have issued their programme of questions.

THE first of the International Congresses arranged for by the French Government has taken place at the Trocadero. The Société des Agriculteurs de France took the initiative under the presidency of the Marquis de Dampierre, the Prince of Wales and Lord Lyons being present. But the attendance was very limited, not more than five or six hundred persons being present in a room fitted to accommodate many thousands. The number of delegates of French and foreign agricultural associations was 112, a large proportion belonging to English societies. The General Secretary delivered an elaborate address in which he reviewed the condition of agriculture in the world generally and principally in England, which may be considered as the home of modern scientific agriculture. The ordinary meetings of the Congress take place in the Pavillon de Flore, Tuileries, and the concluding sitting will be held in the large hall at the Trocadero. The same organisation has been adopted for all the congresses belonging to the Exhibition. The *Journal Officiel* has published their dates and details of organisation.

THE Paris Prefect of Police has granted the authorisation for the creation of a club of students (Cercle des Écoles). This institution is organised by a committee of *bonâ fide* students and professors of the several Government schools and universities, among them being MM. Littré, Hervé-Mangon, Acarias, Wurtz, Robin, Paul Bert, &c., &c. The Minister of Public Instruction has sent his approbation. Social, political, and religious discussions will be strictly forbidden in the institution. It is the first time, at least during the present century, that such an authorisation has been given in Paris.

WE learn, with pleasure, that at a meeting held at Barrow-in-Furness, on June 3, the Committee of the Naturalists' Field Club belonging to that town determined to organise a scheme for sending representatives (artisans, if possible) to the Paris Exhibition, with the view of collecting information in connection with the various branches of science which are there practically illustrated, one of the conditions being that the result of the observations should be imparted to the club in the form of lectures during the ensuing winter. Promises of substantial support have been received from several of the leading men in the district, and the scheme is expected to be shortly in working order.

WE have often had occasion to refer to the progress of science in New Zealand. Our contemporary, *The Colonies and India*, has, in a recent number, an article on education in New Zealand, from which we gather the following facts:—It seems that upwards of 600,000 acres of land is now set apart to provide funds for these educational establishments. Our contemporary may well ask, "Compared with this, what are the endowments made in this or in any other country in the Old World? What may not be hoped from such a commencement, and from a people possessed of such foresight and liberality?" There is a university established with a Royal Charter whose degrees are recognised as equal to those of the English universities. As yet it is only in its infancy. Having no examiners of its own it has still to conduct the examinations for degrees, through means of the professional staff of the colleges which are affiliated to it. The Canterbury College is thus united to it, where the course includes classics, mathematics, modern languages, history, English literature, natural philosophy, political economy, and jurisprudence. This college has received as an endowment 350,000 acres of land, judiciously selected in various districts, and producing a rental of several thousands per annum. In the course of years this will no doubt prove to be of enormous value. "It is open to purchase, at any time, at the rate of 2*l.* an acre; 700,000*l.* is therefore the maximum at which this endowment can arrive. In addition to this there is also a landed endowment for educational purposes, including not only the elementary schools but those of technical science, for classics and superior education, a museum and library, a college of agriculture, and a normal school for the instruction of teachers, a most useful idea." Besides these there is the