

THE FIFTH INTERNATIONAL CONGRESS OF ORNITHOLOGISTS.

THE fifth International Congress of Ornithologists took place in Berlin from May 30 to June 4. Like all the former congresses of its kind, it was well attended, although only a single American and comparatively few English ornithologists were present.

The opening address of the president, Prof. Anton Reichenow, of Berlin, was a lucid, though necessarily short, review of the progress of ornithology within the last 150 years and its present status.

The Hon. Walter Rothschild delivered a lecture on the former and present distribution of the so-called Ratitæ, embracing also some very interesting recent investigations by Mr. C. W. Andrews on the egg-shells of certain ostriches, especially some pieces of the egg of a fossil ostrich, found last year by Messrs. Rothschild and Hartert in the Algerian Sahara. Baron Loudon gave descriptions of the bird-life in Talysh and Transcaspiæ; Prof. Koenig narrated his journey up the Nile to Lado and Gondokoro; Dr. Otto Hermann explained the activity of the Royal Hungarian Central Bureau of Ornithology; Dr. Thienemann that of the "Vogelwarte Rossitten," especially the method and results of his experiments with "ringed birds"; while the other lectures held in the general meetings were about bird-protection and the preservation of "nature's monuments" as connected with bird-life. Numerous communications were made and lectures delivered in the various sections, their number being so great that in some of the sections the time available was hardly sufficient, and discussions had sometimes to be cut short. Of the lectures in the sections, mention can only be made of a few, as most of them were only of interest to specialists.

The proceedings of section i. (systematic, palæontology, anatomy, and geographical distribution) were opened with a lecture by Dr. Hartert, on "what we ought to do and what we ought not to do." The speaker pointed out many evils and shortcomings in the technical treatment of modern bird-study; he specially urged greater care to avoid new synonyms, demanded better descriptions, more cooperation, &c. He pointed out the necessity of liberality in lending specimens to competent persons and institutions, and regarded museums which did not lend material to others as behind the times. He also made clear the necessity of greater care in preparing and preserving the material for study, especially bird-skins, held that they should be more exactly and more securely labelled, and discussed various other technical details.

Mr. Friedrich Rosenberg spoke about the development of the Colymbidæ, Prof. Jacobi discussed the development and systematic position of the "Impennes," and Geheimrat Prof. Virchow gave the results of his study on the mobility of the nuchal vertebræ in the Spheniscidæ.

Prof. Neumann discussed zoogeographical problems, specially referring to the necessity of careful geographical study in connection with the description of subspecies of birds, and their distribution.

In section ii. (migration) a number of lectures were given, of which that of Rittmeister von Lucanus, about the height at which birds migrate, appeared to be of special interest.

In section iii. (biology, oology, acclimatisation), Mr. Lucanus also made very important statements regarding the psychology of birds. Dr. and Mrs. Heinroth lectured on the biology of certain Anatidæ, and on the breeding in captivity of *Caprimulgus* and *Locustella*.

Graf Zedlitz dealt with the breeding-seasons of African birds.

Dr. Weigold gave interesting details about the former and present status of bird-life on Heligoland, and recommended the continuation of regular observations on that island "before it would be too late."

In section iv. (bird-protection) the necessity for the prohibition of the introduction of feathers and bird-skins for millinery purposes was urged, and the question of international bird laws discussed.

Section v. was devoted to poultry and other domesticated birds, and appeared to be well attended.

At the meeting of the International Ornithological Committee it was decided that the *Ornis* should not be con-

tinued in the form of a regular periodical, but of irregular volumes containing the proceedings of the various ornithological congresses, and special scientific treatises, in the event of material and means being available for the purpose.

In every town a congress has its peculiar features. While some of the characteristics of the fourth Congress of Ornithologists in London were the excursions to Tring and Woburn Abbey, and the visit to the Bempton Cliffs, with their breeding-colonies of sea-fowl, the congress at Berlin was remarkable for the various liberal entertainments in the town. The city gave a dinner in the famous Town Hall, the Zoological Garden Society a luncheon, the Ornithological Society a supper, and one evening was pleasantly spent in the natural history theatre, called "Urania."

An illustrated guide and excellent map of Berlin were presented to every member, also a reprint of Lichtenstein's very rare "Verzeichniss einer Sammlung von Säugethieren und Vögeln aus dem Kaffernlande," of 1842, a description of the "Vogelwarte Rossitten," and various other pamphlets and booklets. E. H.

THE DANGERS OF FERRO-SILICON.¹

FERRO-SILICON, averaging about 13 per cent. silicon and made in the blast-furnace, has been used in steel works, and to a certain extent in iron foundries, for many years. Steel castings were made with about 0.3 per cent. silicon to help in the prevention of blow-holes, and at the same time to aid in giving the properties required by engineers; and in foundries the ferro-silicon is used to add to mixtures of iron, such as those containing large percentages of scrap, that would otherwise yield a hard casting, as the added silicon has the effect of changing the combined to free or graphitic carbon on cooling. Within the last few years much richer ferro-silicons have been made in electric furnaces, and have found a ready sale. They are useful for special crucible steels and for certain steels for electrical work, and also for adding silicon in the ladle in the case of basic open-hearth practice, as there it is impossible to do this efficiently on the hearth, though it is easily done in the acid process.

With the electrically produced high-grade ferro-silicon came trouble. The present writer remembers the great interest taken in the earliest recorded case of this trouble as given by Dr. Dupré and Captain Lloyd at the Iron and Steel Institute in May, 1904. Owing to a fire having occurred on a vessel, the cargo, including 50 per cent. grade ferro-silicon brought from Trieste, was discharged on December 17, 1903. On January 12, 1904, the forty-eight drums containing the ferro-silicon were removed to a warehouse in Bootle, and whilst being rolled from the truck on to the concrete floor one drum exploded. Dr. Dupré and Captain Lloyd, after careful investigation, pronounced the explosion to be due to PH₃ evolved owing to the action of damp air, and gave a weighty and serious warning with regard to the handling and storing of this comparatively new product.

So explosions and spontaneous ignition came in the train of the new material; but it was to make its powers felt in another way. On the S.S. *Vaderland*, Antwerp to New York, over a hold in which ferro-silicon was stored, fifty steerage passengers were made ill and eleven died, of whom nine were buried at sea, and two corpses landed at New York, as plague was feared. In March, 1906, two children died on a Rhine boat. On October 21, 1905, two children died on board a "keel" on the Keadby Canal; the father and mother were taken seriously ill, but recovered on deck. In February, 1907, on the *Olaf Wyjk*, Gothenburg to Antwerp, four passengers died. In May, 1908, on the S.S. *Uleaborg*, Stockholm to St. Petersburg, the crew and second-class passengers were taken ill, and two died. On October 29, 1908, on the keel *Harry*, Captain Bamfield and the mate, his grandson, started from Goole with ferro-silicon on board, apparently consigned as "scrap iron." On the night of Friday, October 30, the mate was

¹ "On the Nature, Uses, and Manufacture of Ferro-silicon, with Special Reference to possible danger arising from its Transport and Storage." Local Government Board Report, 1909. By Dr. S. M. Copeman, F.R.S., S. R. Bennett and Dr. H. Wilson Hake. Pp. viii+115. (Cd. 4958.) Price 1s. 11d.