

The birds were first trained to search for food indiscriminately in the various chambers, and then developing an odor in the chamber containing the food record was kept as to whether or not the bird entered this chamber in preference to any of the others. The experiments were repeated a number of times and with different odorous materials. Although the birds never learned to find their food with perfect accuracy, it was evident that they were guided to some extent by at least one of the materials used; the percentage of correct entrances being notably larger than would have been expected according to the law of error.

Dr. Strong concludes that birds have a sense of smell, which in some species at least is more acute than in man. He agrees with Turner that the development of keen vision in birds is being accompanied by a degeneration of the olfactory sense, and further suggests that a mutual relation between the olfactory and visual senses may exist, which makes it very difficult for a bird to react to an olfactory stimulus only.

The literature of the subject is considered but in the case of published field observations the author says the chances of error in interpretation are so great that they have little value.

Dr. Strong has made a welcome contribution to a much mooted question, and has started a line of investigation which may be followed with profit by others. With a clear understanding of the difficulties as set forth by him and a constant check on unwarranted inference, it would seem that field observations of real value should be possible.— W. S.

**Lowe's 'A Naturalist on Desert Islands.'**<sup>1</sup>— The author here presents an account of visits to some of the remote and unfamiliar islands of the Caribbean Sea— Swan Island, Blanquilla and The Hermanos. The physical features of the islands, their inhabitants, their geological history and the origin of their fauna and flora are treated entertainingly along with the narrative of the voyage, making an interesting and readable volume. The ornithological results of the cruise have already been published elsewhere, but many observations on bird-life are given here in a more popular and detailed manner. Among the illustrations are photographs of Boobies and Frigate Birds and several maps.— W. S.

**Lechner's 'Oologia Neerlandica.'**<sup>2</sup>— Part I of this work,<sup>2</sup> which was announced in the July Auk, is now at hand. It comprises text for sixty-

<sup>1</sup> A Naturalist | on Desert Islands | By | Percy R. Lowe, B. A., M. B. (Cantab.) | Member of the British Ornithologists' Union | With thirty-two plates and three maps | Witherby & Co. | 326 High Holborn, London | 1911 — Svo, pp. xii + 300. 7s. 6d. net.

<sup>2</sup> Oologia Neerlandica | Eggs | of | Birds | Breeding in the Netherlands | By | A. A. Van Pelt Lechner | Member of the Board of the "Nederlandsche Ornithologische Vereeniging" | (Netherland Ornithological Society) | With colored plates made direct from specimens | in the author's collection | vignette | The Hague | Martinus Nijhoff | 1911. Small 4°. 250 copies printed of which 100 are in English. Part I, (Sept., 1911) comprises Plates 1-10, 12, 13, 15, 16, 20, 23, 25, 27-29, 33-35, 37, 39-44, 46, 47, 76, 83, 84. Price £1.10 net.

two species and thirty-five plates, the text sheets and plates being unbound in a folder. The work is beautifully prepared, the text handsomely printed on handmade paper, the illustrations admirable color plates, each figure being mounted separately on heavy paper, three to six on a plate.

Under each family the eggs of the several species are discussed with regard to their resemblances and systematic relationship, as well as their variation in color and form; while much interesting information regarding the depth of deposit of the pigment in the shell, and the composition of the pigments, is presented. Following this is a page for each species, intended to face the plate when bound, upon which is given the "Colour of shell, colour of spots, average dimensions, average weight of shell, texture of shell, shape, nest, site of nest, number of eggs, breeding season, and duration of incubation." As a purely "oölogical" work it is one of the best that has appeared and could be studied with profit by those who desire to place egg collecting on the plane of a science instead of allowing it to become a mere fad as has too often been its fate in America.— W. S.

**Berlepsch on Birds of the Aru Islands.**<sup>1</sup>— This paper, while based primarily upon a collection made by Dr. Hugo Merton from January to May, 1908, is extended to include all species hitherto reported from the islands. References to place of publication, type locality, and published records for each species are given, which form a valuable summary of our knowledge of the birds of this interesting group. A table is appended showing the distribution of the species or related geographic races in New Guinea and other neighboring islands.— W. S.

**Riley on Three New Birds from Canada.**<sup>2</sup>— In identifying a collection of birds taken on the 1911 Expedition of the Alpine Club of Canada to Jasper Park, Yellowhead Pass, and the Mount Robson region of British Columbia and Alberta, Mr. Riley finds three races which he regards as separable. A Song Sparrow, *Melospiza melodia inexpectata*, is intermediate between *M. m. rufina* and *M. m. merrilli*, apparently a case of very close splitting since the last form has been recently regarded as merely an intermediate between *rufina* and *montana*. A Fox Sparrow, *Passerella iliaca altivagans*, is based upon "two slightly immature birds from Moose Branch of the Smoky River" and some migrants from farther south. Mr. Riley's studies of the Willow Ptarmigan lead him to recognize three forms in North America, *Lagopus lagopus alexandrae* Grinnell from the southwestern coast of Alaska, *L. l. albus* Gmelin from Hudson Bay to Siberia, and a form from Ungava which he names *L. l. ungavus*.— W. S.

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<sup>1</sup> Die Vögel der Aru-Inseln mit besonderer Berücksichtigung der Sammlungen des Herrn Dr. H. Merton. Von Hans Graf von Berlepsch. Abhandl. der Senckenbergischen Naturforschenden Gesellschaft, Bd. XXXIV, 1911.

<sup>2</sup> Descriptions of three New Birds from Canada. By J. H. Riley. Proc. Biol. Soc. of Washington, XXIV, pp. 233-235. Nov. 28, 1911.