

examples from the structure of various parts of the bird in every discussion of adaptation and development and these chapters impress us as the strongest. His treatment of geographic distribution is hardly up to date but it is difficult to treat this matter adequately in the short space allotted to it, and the same may be said of the chapter devoted to migration. All in all however, there is little to which exception can be taken in the plan and execution of the 'History of Birds.' It should be in every library and it cannot fail to broaden the views of the younger ornithologists and lead them into lines of research which will yield valuable results in the near future.—
W. S.

Headley's 'The Flight of Birds.'¹—The serious study of bird flight brings ornithology into the domain of physics and mathematics and since the average ornithologist does not care to go very far into this field of research a book like the present will find a very general welcome, attempting as it does to explain the subject with as few technicalities as possible. Mr. Headley considers flight under several heads: Gliding, Stability, Motive Power, Starting, Steering, Stopping, The Machinery of Flight, Varieties of Wing and of Flight, Pace, Wind and Flight, Some Accessories. Numerous excellent illustrations are taken from photographs of flying birds in various positions and under varied conditions.

In considering the sailing of Gulls against the wind, so often observed from a steamer's deck, Mr. Headley states definitely that the birds are poised on a steady upcurrent of air over the stern of the vessel, caused by the wind striking the sides of the vessel at an acute angle. Mr. William Brewster after careful consideration of this theory dismissed it absolutely after finding that the Gulls sailed equally well, in advance of the vessel, a hundred yards behind, or fifty yards to windward (cf. 'The Auk,' 1912, p. 90). Therefore it would seem that the last word on this problem is yet to be said and it might be profitable as has been suggested to compare the Gulls to the sailing of an ice yacht which, paradoxical as it may appear, goes faster the nearer it is brought into the 'teeth of the wind.'

Mr. Headley's book is a welcome contribution to an interesting subject, the more so since with the aid of gliders and aeroplanes man is beginning to face the same problems which the bird has solved so successfully.—W. S.

Howard's British Warblers. Part VI.²—The latest installment of this beautiful work consists of colored plates of the Willow, Savi's, Rufous and Icterine Warblers with text relating to all but the last, while four photo-

¹ The | Flight of Birds | By F. W. Headley, M. B. O. U. | Author of "The Structure and Life of Birds" | "Life and Evolution" &c | With Sixteen Plates | and Many Text Figures | Witherby & Co. | 326 High Holborn | London | 1912.—Crown Svo., pp. i-x + 1-163, with 16 plates and 27 text figures. Price 5s. net.

² The | British Warblers | A History with Problems | of | their Lives | by H. Eliot Howard, F. Z. S., M. B. O. U. | Illustrated by Henrik Grönvold | London R. H. Porter | 7, Princes Street, Cavendish Square, W. | Price 21s. net.—Part 6. December, 1911.