

of strong flight, and the body feathers are very apt to precede in their growth the remiges and rectrices, although in the two specimens cited, the rectrices are already partly renewed. The third specimen (Phila. Acad. Nat. Sci., No. 15661, French Guiana), is unfortunately undated, but it is evidently passing from the juvenal plumage by what must be called a postjuvenal moult. The worn first primary, inner secondaries and a few of the rectrices, together with a green-tinged back, indicate a young bird. The crown now worn brown also indicates juvenal plumage, while new feathers are breaking from their sheaths, both on the head and throat. These birds all bear out my conclusion that adult Swallows moult earlier than young birds which undergo a complete postjuvenal moult, often in midwinter. It is, on the whole, expedient to speak of a postjuvenal moult and not of a prenuptial, even in those species which are late in assuming a first winter dress, which then becomes that of the first summer simply through wear. This sequence of plumages obtains largely both among the North American *Hirundinidæ* and *Tyrannidæ*, and I am glad of this opportunity of calling attention to it.

I would also correct here a slip of Mr. Stone's pen at page 118 of his review in 'The Auk,' where he has inadvertently credited the Cross bills with a "prenuptial" moult, meaning of course, the postnuptial.—  
JONATHAN DWIGHT, JR., *New York City*.

**To Remove Fat from Bird Skins.**—Fat on sea and water birds is especially difficult to get rid of. It means long and tedious scraping, often with unsatisfactory results. Benzine, sulphuric ether, alkalies and other solvents of grease and oils, are either unpleasant to use, dangerous in a room with fire or lamp, evaporate rapidly or are expensive, and after all only dissolve the contiguous layer of fat at each application, often leaving the skin in bad condition.

One day, when almost on the point of throwing away in despair a hopelessly fat specimen, which had been scraped until nearly disintegrated, and, after having been treated with cornmeal, sawdust and plaster of Paris, still showed oil when pinched, the idea occurred to me of using an absorbent at a sufficiently high temperature to melt out the oil and absorb it at the same time. Some plaster of Paris was put in a bread tin, heated on top of the stove until fairly hot to the hand, and then a thick layer was spread on the bird skin. This was pressed down and manipulated until a sufficient time seemed to have elapsed, when it was carefully brushed off. The result exceeded my expectation. A second application practically removed all the oil. Since then I have continued using this method with success.

The skin must, of course, be first scraped so as to break the fat-containing tissues and as much fat as possible scraped off, using cornmeal or sawdust as an absorbent while operating. After this the hot absorbent may be applied. The skin may seem very dry after the operation, but this is really only on the surface, and going over it with a damp

sponge or cloth will moisten it enough to make the necessary amount of arsenic adhere and to keep the skin pliable until stuffed.

Fine sawdust or cornmeal may be used by taking care to stir while heating, but plaster of Paris gives the best results, as it can be heated to a much higher temperature than anything organic, and with no trouble. On birds of dark colored plumage, however, plaster must be applied in such a manner as not to come in contact with the feathers, as it will usually stick to them enough to lighten the shade.—JOSEPH MAILLIARD, *San Geronimo, Marin Co., Cal.*

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## RECENT LITERATURE.

Barrington's 'The Migration of Birds at Irish Light Stations.'<sup>1</sup>—In this volume of nearly 1000 pages we have the results of observations, continuously and systematically carried on, at the Irish light-stations from 1881 to 1897, or for a period of eighteen years. Observations appear to have been made at some fifty lighthouses and lightships, the returns embracing about a thousand schedules and "about thirty thousand separate observations," and over two thousand specimens. The elaboration of this enormous amount of information involved years of labor, and Mr. Barrington makes acknowledgment to Mr. C. B. Moffat for important aid in its analysis. A list of the light stations is given as part of the introductory matter, which is immediately followed by 'Analysis of the Irish Migration Reports, 1881-1897' (pp. 1-262), the reports being summarized for each of the species observed, these summaries sometimes occupying several pages for a single species, including comment on the various facts reported.

The species number about 170, and are treated in systematic sequence. Following this is a statement of 'Some of the Principal Points of

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<sup>1</sup> The | Migration of Birds | as observed at | Irish Lighthouses and Lightships | including | the Original Reports | from 1888-97, now published for the first time, and | an Analysis | of these and of the previously published Reports from 1881-87. | Together with | an Appendix | giving the measurements | of about 1600 wings. | By | Richard M. Barrington, M. A., L. L. B., F. L. S., | Member of the British Ornithologist's Union, and of the British Association | Committee for obtaining Observations on the Migration of | Birds at Light-houses and Lightships. | London: | R. H. Porter, 7 Princes Street, Cavendish Square, W. | Dublin: | Edward Ponsonby, 116 Grafton Street. [1900.]—Svo, pp. i-xxv. + 1-285 + 1-667, map and text cuts. Only 350 copies printed.