NOTES ON EAGLE-OWLS.

BY THE HON. WALTER ROTHSCHILD AND ERNST HARTERT.

A BOUT a year ago we were told that a form of the Egyptian Eagle-Owl occurred in Asia Minor. We therefore asked Mr. Carl Hilgert, who has a correspondent in Asia Minor, to procure us some specimens. This he did, and we received four adult Eagle-Owls from Eregli, north of the Taurus Mountains. They were, however, in no way like the Egyptian Eagle-Owl, but very closely allied to Bubo bubo turcomanus. They led us to compare the series of Eagle-Owls in the Tring Museum, in which we have been particularly interested for some time, with the following results:

Bubo bubo bubo (L.).

Strix Bubo Linnaeus, Syst. Nat. ed. x. p. 92 (1758—"Habitat in Europa." Terra typica: "Sweden," from the first quotation: "Fn. svec. 45").

We have examined thirty-eight skins from Europe which we consider to belong to this form. We are not able to separate any subspecies, except from the farthest south-west (Spain) and the south-eastern parts of Russia (Southern Ural and Caucasus). A good series from Norway and Sweden, and numerous skins from Germany, show these birds to be absolutely the same, and examples from Dalmatia, Croatia, Greece, and Italy are inseparable. Far from being in any way smaller, we find very large examples among the series from Southern Europe. This form is the darkest of all. The black shaft-stripes on the chest are broad, and there are generally very distinct cross-bars. It extends into Northern and Central Russia.

An Eagle-Owl which must be very closely allied to *B. bubo bubo* is found in Northern Algeria. Loche distinctly says that he had specimens, and Taczanowski saw a stuffed one in the possession of an officer. Probably the Algerian Eagle-Owl will be found to differ slightly from the North European one. We suspect that it will only be found in the Northern Atlas Mountains, while *B. b. ascalaphus* inhabits the southern ranges.

Bubo bubo hispanus subspec. nov.

? Bubo maximus occidentalis A. E. Brehm, Verz. Samml. p. 2 (1866-Nomen nudum!).

The examination of seven Spanish Eagle-Owls, from Aguilas (Gray coll.), Malaga, and Madrid, shows that they differ slightly from B. bubo bubo. As long ago as 1857 A. E. Brehm remarked (Naturh. Zeitung iii. p. 441) that he was almost inclined to consider the Spanish Eagle-Owls as synonymous with B. sibiricus. Also, Professor Koenig remarked to one of us (in litteris) that he thought the Spanish form was separable.

This is indeed the case, for the under surface is as a rule much paler, and the wing averages from 2 to 5 cm. shorter. The black longitudinal marks on the chest are sharply defined, and generally without cross-markings laterally.

No name is available for this form. A. E. Brehm, in the list of C. L. Brehm's collection, mentions a "Bubo maximus occidentalis" without description and locality. This name was probably meant for the Spanish race, as it is scratched on the label of the Spanish Eagle-Owl in the Brehm collection.

The type of Bubo bubo hispanus is a male in the Tring Museum shot at a nest containing two eggs near Aguilas, February 12, 1898, by Mr. Gray. An adult female from the same place, also shot from a nest, resembles more the

northern B. bubo, except that the black stripes on the chest are very wide. It is also rather larger than other Spanish skins, the wing measuring nearly 47 cm.

Bubo bubo interpositus subspec. nov.

This form is intermediate between B. bubo bubo and B. bubo turcomana, but nearest to the latter. It differs, however, from B. b. turcomana in having wider shaft-stripes to the feathers of the abdomen, a darker brown ground-colour on the feathers of the hind-neck and upper back, and, usually, more black on the scapulars, lower back, and upper tail-coverts. The underside of the quills is also darker than in B. b. turcomana, while in B. b. bubo it is often still darker.

B. b. interpositus is lighter above and below than any specimens of B. bubo bubo, and not so blackish above as the Spanish form (B. b. hispanus).

In size this new form does not differ from B. bubo bubo.

Type: & ad., 15. iii. 1909, Eregli, north of the Cilician Taurus, in Asia Minor, collected by Mr. C. Hilgert's collector.

Besides the specimens from Eregli, those from the Caucasus (Władikawkas), and from the Lower Wolga (Sarepta), belong to this form. It is possible that other forms—viz. B. b. sibiricus and B. b. turcomana—visit the Lower Wolga in winter; but four specimens which we were able to examine are indistinguishable from the type of B. b. interpositus, and not like any of the other forms.

We have examined five skins from Eregli—four in the Tring Museum and one in Professor Koenig's collection; two from Wladikawkas, Northern Caucasus; and four from Sarepta.

Bubo bubo turcomana Eversm.

Strix turcomana Eversmann, Addenda ad Pallasii Zoograph. Rosso-Asiat. i. p. 3 (1835—Between the Caspian and Aral Seas).

This race is much lighter than B. b. bubo and B. b. hispanus, and also distinctly lighter, more yellowish and more sandy, than B. b. interpositus. Especially the ground-colour of the occiput, hind-neck and upper back is lighter, also the under surface of the quills. Generally B. b. turcomana is also smaller and slenderer than B. b. bubo, but some specimens are apparently as big as any northern Eagle-Owl. Single specimens are sometimes hardly distinguishable from B. b. interpositus, but as a rule they are very well separable.

We have before us twenty-two specimens belonging to $B.\ b.\ turcomana$. They are from Transcaspia, Russian Turkestan (Issik Kul, Tian Shan, Aksu, Djarkend, Karakol, Margelan, Merw), Kerat in East Persia, Persian Baluchistan, and one from Blagoslovenka, near Orenburg, in the Southern Ural. The latter was obtained on December 5, 1888, by N. Zarudny, and marked as $Bubo\ ignavus\ (=B.\ b.\ bubo)$. It is absolutely like Transcaspian and Turkestan examples, and neither to be confounded with $B.\ b.\ bubo$ nor with $B.\ b.\ sibiricus$. The latter, however, appears to be found in winter near Orenburg as well.

We are not acquainted with

Bubo bubo nikolskii Zarudny.

The author described (Orn. Jahrb. 1905. p. 142) this form as being closely allied to B. b. turcomana, but smaller, and having a smaller area on the chest covered with bold markings, which merge almost without transition into the very narrow shaft-lines on the lower breast, while the markings on the abdomen are finer and the upperside is more rusty. Mr. Zarudny had a pair from Arabistan (Chusistan) in West Persia.