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### XXV.—On the snowy owl, *Surnia nyctea*, Dumeril

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# ANNALS OF NATURAL HISTORY.

XXV.—*On the Snowy Owl, Surnia nyctea, Dumeril.* By  
WILLIAM THOMPSON, Esq., Vice-President of the Natural  
History Society of Belfast.

ON the 2nd of December, 1837, a beautiful specimen of the snowy owl was shot in a quarry on Scrabo mountain in the county of Down, and came into the possession of Thomas M'Leroth, Esq., of Killinether House, in that neighbourhood, who liberally presented it to the Belfast Museum. Having come under my inspection in a recent state, I drew up the following description of it, which, differing in some particulars from that of other specimens described in detail\*, and for the purpose of comparison with individuals noticed in the sequel, may not be superfluous.

	inch.	line.
Length, entire .....	24	0
Length of wing from carpus to end of longest quill .....	16	6
———— tarsus .....	2	3
———— bill measured along ridge .....	1	9
———— cere on its ridge .....	0	9
———— bill in a straight line from rictus to outer edge .....	1	9
———— middle toe .....	1	6
———— its claw, following curvature .....	1	8
———— its claw in a straight line .....	1	3 $\frac{1}{4}$
———— inner claw, following curvature.....	1	9
———— outer claw, following curvature.....	1	6
———— hind claw, following curvature .....	1	5
Wings pass the tail .....	1	6

Extent of wings 4 feet 9 $\frac{1}{2}$  inches; first quill 1 $\frac{1}{2}$  inch shorter than the second, which is about 2 lines shorter than the third, this being the longest; the fourth is about 2 lines shorter than the second, the fifth 2 lines less than the first in length: this relative proportion of the quills is the same in another specimen preserved in the Belfast Museum.

Colour of forehead, throat and upper portion of breast,

\* See 'Fauna Boreali-Americana,' Part 2. p. 190.

lower part of belly, under tail coverts, under side of wings, (except the roundish spots towards the points of primaries, secondaries, and tertials,) and entire legs, white. Plumage of the body beneath the wings, lower part of breast and upper portion of belly, white, beautifully barred with blackish-brown in waved and variously formed lines, about half an inch apart, and becoming narrow as they approach the tail; the greatest breadth of these dark bars about  $1\frac{1}{2}$  line. Feathers of the occiput white, tipped with black; lower part of nape where the head joins the body white; back, scapulars, and coverts of the wings, white, closely barred with blackish brown. Primaries, secondaries, and tertials (which, as to colouring, cannot well be separated in description from blending into each other,) at first darkly barred on both outer and inner webs towards the tips, but gradually becoming less so towards the centre, (secondaries generally,) where three or four round spots appear on the outer web only; thence the spots become more numerous, and towards the body (tertials) the bars again appear on both webs, thus in the markings balancing the primaries on the opposite side; upper tail coverts with narrow bars of blackish brown. Tail feathers twelve in number, the two outer ones pure white, third and fourth with two broad bars of dark blackish brown near the tip, fifth and sixth with three bars of the same colour. Irides golden yellow. Weight  $3\frac{1}{4}$  lbs. This bird was fat and in high condition. On dissection it proved a male; its stomach was quite empty.

In the month of October last, my relation Richard Langtry, Esq., of Fort William, near Belfast, received three live specimens of the snowy owl, which were taken in the previous month of August, from a nest in the vicinity of the Moravian settlement, on the coast of Labrador. He had commissioned a person to procure for him there living specimens of the Gyr falcon, for which the owls were mistaken. These nestlings were at the time covered only with down, and were so young that it was at first feared they would not survive until the arrival of the vessel in London. Due care was however taken of them: upwards of 700 mice, procured by an Esquimaux for the occasion, were stowed in the vessel for their support; when these were consumed, reindeers' flesh was given them; and

when the vessel came near soundings, they were supplied with sea-gulls caught upon baited hooks. An examination of these individuals has enabled me to correct an error which appears in some of the best ornithological works respecting the plumage of the snowy owl in the first year. This error seems in part, at least, to have originated with Bullock, who states, but not from personal observation, that the young birds which are seen in the Shetland Islands flying about with their parents are brown at the end of summer. Temminck also remarks, that "les jeunes, au sortir du nid, sont couverts d'un duvet brun; les premières plumes sont aussi d'un brun clair\*." Audubon observes, "I have shot specimens, which were, as I thought, so young as to be nearly of a uniform light brown tint, and which puzzled me for several years, as I had at first conceived them to be of a different species†." On arrival, when they were in good condition, the birds under consideration were as follows: One much smaller than the others, and presumed to be a male, was considerably whiter than the specimen shot in a wild state, and whose plumage has just been described, but displayed two markings which the other does not possess; the back of the head where it joins the body being blackish brown, and another patch of this colour on the body just before the carpal joint of the wing. The supposed females, which are much larger than the last-mentioned, differ exceedingly from it in markings. They have the facial plumage or that within the disk, the throat, body beneath the wings, under surface of the latter, and the legs and toes pure white. The plumage of the head from the disk posteriorly, back, upper side of wings, and whole under plumage between the folded wings presents as much of a blackish brown colour as of white, the former being disposed in the same manner as described in the specimen with which this communication is commenced; but the bars and other dark markings are so broad as to occupy equal space with the white or "ground" colour.

As immature, and especially the young birds of the year, generally wander further than those which have attained maturity from their native domicile, it has hitherto appeared

\* Man. Orn. Eur. t. i. p. 82.

† Orn. Biog. vol. ii. p. 136.

singular to me that none of the specimens of the snowy owl obtained in so southern a limit of their flight as England and Ireland, should be in the garb which is described previous to the first moult; but the plumage exhibited by these Labrador birds satisfies me, that the young of the snowy owl, like the immature individuals of many other species, do scatter themselves more widely than the adults.

The bird shot at Scrabo I have no doubt was a nestling in the summer of 1837. The individual figured by Mr. Selby\* is also less white than Mr. Langtry's male bird, and if belonging to the same sex I should consider it a bird of the first year. Of two other individuals, male and female, recorded by Mr. Selby to have been killed in Northumberland in 1823, the latter was, from the number of black bars and spots, considered by that gentleman to be a young bird, but no opinion on the age of the male is offered; he is however stated to have been much whiter than the female, a circumstance which, as we have seen, does not militate against his also being a young bird of the year. Of the other specimens killed in England I have not seen such detailed descriptions as enable me to judge of their age from comparison with the Labrador birds; nor, in consequence of its sex being unknown, can a satisfactory opinion be offered on the first snowy owl recorded to have been obtained in Ireland. (*Zool. Proc.* 1835, p. 78.) Were the sex of the individuals known, we should probably find that the greater number of these noble birds which have wandered to the British Islands have been the young in the plumage of the first year.

It is thought desirable to add the following notice of the habits of these owls reared from the nest, as compared chiefly with those of Dr. Neill's bird†, procured when full grown. The male and one female specimen now in Mr. Langtry's possession are wild, and sometimes fast for one or two days though food is within their reach. They are chiefly fed on the heads of poultry, wild fowl, and rabbits, but mice and rats are preferred, as are also sea gulls; from these birds no feathers have to be plucked, as the owls very efficiently render this

\* *Ill. Brit. Orn.* pl. 23.

† See *Naturalist's Library: British Birds*, Part I. p. 307.

service for themselves. The heads of plaice (*Platessa vulgaris*) several times offered them were refused, and being forced down their throats were instantly ejected. Castings of the indigestible portions of their food are regularly thrown up. Although the female is very partial to washing, the male has never been known to wash himself. Their usual cry is a long-drawn scream, but frequently they keep a low purring noise like a cat, and the male bird, when chased to his annoyance, utters a sound like coo-coo-coo (described by Dr. Neill as "cuckoo.").

The third individual, a female, is very different from the others, in being somewhat playful and quite familiar even with strangers. Live rats turned out to her have been invariably captured within a very short time. In the few instances where I have seen dead prey seized, the four claws were used\*. Standing about a pace distant from this bird on one occasion when she was at liberty, and during bright sunshine, it was interesting to observe the contraction of the pupil of the eye, which was particularly conspicuous from contrast with the immense golden irides. When attracted by larks which were singing at a great elevation and distance, the pupil, from the ordinary size, adapted to near objects, instantly diminished to its minimum or half the ordinary diameter; and again when the sight was directed to birds at less distance, its diminution varied accordingly. The other two owls are not in the least affected by bright sunshine; and from their observing birds passing at a great height in the air, or as expressed to me "almost in the clouds," they are considered to see as far as a golden eagle, their companion in captivity.

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XXVI.—*The Natural History of the British Entomostraca*,  
No. V. By WILLIAM BAIRD, Surgeon, H.C.S., &c.

[With a Plate.]

(Continued from Mag. Zool. and Bot. vol. ii. p. 412.)

DAPHNIA.

*Anatomy*.—The body of the insect is composed of two parts very distinct from each other; the one much smaller than the

\* See observation to the contrary in the last-cited work, p. 310.