On the Subspecific Validity of *Pyrrhula uchidai* Kuroda of Formosa.

By

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With Plate I.

Marquis Yamashina has recently received 16 adult males, 11 adult females and 3 juvenile females of *Pyrrhula uchidai* and 5 adult males, 5 adult females and 1 juvenile female of *P. owstoni* from Formosa, and has just published his paper(see, pp.1—6 of this number of "Tori," in Japanese)on the critical notes upon *P. uchidai* and *P. owstoni* of the mountains of Formosa, giving the decisive conclusion to distinguish between them.

His valuable conclusion leads that while *P. uchidai* is a valid subspecies of *nipalensis*, *P. owstoni* is a subspecies of *erythaca*, and Ogilvie-Grant's *arizanica* is a pure synonym of *owstoni*.

The reason of his conclusion is as follows:—

Messrs. Rothschild and Hartert's description: "*Juv.* Feathers of crown blackish, edges with light greyish-brown" (Bull. B. O. C., xxi, p. 10) is not a description of juvenile of *owstoni*, but an adult of *uchidai* ! And the late Mr. Ogilvie-Grant has erroneously compared his adult male of "*arizanica*" with an undescribed form (*uchidai*); the latter has been considered by him as a typical *owstoni*.

I am greatly indebted for the Marquis's re-examination about the two forms of the different species and I must express my sincere congratulation on his decisive conclusion of such a complicated and difficult problem.

At this opportunity I am going to add a few paragraphs about them.

Pyrrhula erythaca owstoni.

1907.-*Pyrrhula owstoni* Rothschild & Hartert. Bull. B. O. C., xxi, Oct. 29, 1907, p. 9(Mt. Arizan, ♂ ad. with feebly reddish on sides of the breast).

1912.-*Pyrrhula arizanica* Ogilvie-Grant, Ibis, p. 644 (Mt. Arizan, ♂ ad.

with deeper reddish on the breast).

I have kept the following skins which are not included in Marquis Yamashina's paper. They measure as follows:

No.	Locality	Date	Sex	Wing	Tail	Tarsus	Exposed culmen	Collector
4238	Niitakazen- zan	9. iv. 1919	♂ ad.	82	69.5	17	10.5	Kikuchi
*4239	"	" " "	♂ ad.	82	70	18	10.5	"
4240	"	22. " "	♂ ad.	80.5	67	18	10.5	"
4241	"	23. " "	♀ ad.	80	65.5	18	11	"
3671	Arisan	15. ix. 1918	♀ ad.	77.5	63.5	18	10.5	"
3672	Nôkôzan	17. " "	♀ juv.	80	70.5	18	10.5	"
3673	"	18. " "	♀ ad.	79	68	18.5	10	"
4519	"	22. v. 1920	♀ ad.	78	66	18	10.5	"

My adult male specimens have their sides of the breast only washed or patched with reddish orange, exactly like the original description of Messrs. Rothschild and Hartert. Possibly Marquis Yamashina (see his Japanese description) is quite right to consider that the reddish patch is variable according to the individual and would not have colour phases as in the cases of *P. pyrrhula griseiventris*.

No. 3672 in my collection is a juvenile female which has the crown and nape uniform duller brown, the chin duller greyish black and the breast and flanks paler than the adult females before me.

Pyrrhula nipalensis uchidai.

1912.-*Pyrrhula owstoni* (nec Rothschild & Hartert), Uchida, Annot. Zool.

Japon., viii, pt. 1, p. 203 (Shishaban, Banshoryô Distr., July 16).

1912.-*Pyrrhula owstoni* (nec Rothschild & Hartert), Ogilvie-Grant, Ibis, p. 644.

1915.-*Pyrrhula owstoni* (nec Rothschild & Hartert), Uchida, Birds of Japan, Suppl., p. 93, Oct. 4, 1915 (Arisan). (In Japanese.)

1916.-*Pyrrhula uchidai* Kuroda, Dôbutsugaku Zasshi, xxviii, p. 265, July 15, 1916 (Shishaban, Akô Distr.—♂ ♀, July 16, 1909, K. Kikuchi coll.). (In Japanese.)

* Exchanged with a different species of bird by the Zoological Museum, Berlin.

1917.-*Pyrrhula uchidai* Kuroda, Annot. Zool. Japon., ix, pt. 3, p. 295 (Shishaban, Akô Distr.).

1919.-*Pyrrhula uchidai* Kuroda, Hartert, Nov. Zool., xxvi, p. 160 (as a young of *owstoni*).

1928.-*Pyrrhula uchidai* Kuroda, Tori, vi, no. 26, p. 9 (as a young of *owstoni*). (In Japanese.)

1932.-*Pyrrhula uchidai* Kuroda, Hand-L. Jap. Bds., p. 13 (as a young of *owstoni*).

Mr. T. Kazano of Formosa has recently collected two pairs of *uchidai* on Mt. Arisan and has sent me one of the females for identification. It measures as follows: ♀ ad., Kazano's coll. no.34, Numano-taira on Mt. Arisan, 13. vi. 1935, wing 85.5, tail 72, central rectrices 51, tarsus 16.5, exposed culmen 10.5mm.

Mr. Kazano has informed me that *uchidai* and *owstoni* are usually found in different groups in the wild state. But they may be in a company together sometimes as already stated by some authors.

I am glad to publish a coloured plate which contains my type male and paratype female of *uchidai* from Shishaban, Akô District (now in Takao-siu) as the Plate I of this number of "Tori." The plate was drawn by Mr. K. Yokoyama in 1916*

A longitudinal white patch on the central rectrices is one of the definite characteristics of this form; not a partial albinism as considered by Dr. Hartert (Nov. Zool., xxvi, p. 161, 1919). For, Marquis Yamashina has found it in all specimens (27 ♂ ♀) and none of the specimens have uniform central rectrices!

There are 4 forms of *erythaca*-group and 5 of *nipalensis*-group which have been known to science. They are listed and annotated below:

Pyrrhula erythaca-group.

1. *Pyrrhula erythaca erythaca* Blyth. Beavan's Bullfinch.

1862.-*Pyrrhula erythaca* Blyth, Ibis, p. 389 (Sikkim).

* A coloured figure of an adult male of *P. erythaca owstoni* is appeared in the plate 11, fig. 87 of Kuroda's "Birds in Life Colours," Vol. I (1933).

- Distr. "Sikkim, Bhutan and the hills North of the Brahmaputra"
(S. Baker).
2. *Pyrrhula erythaca altera* Rippon. Rippon's Bullfinch.
1906.-*Pyrrhula altera* Rippon, Bull. B.O.C., xix, p.19(W.Yunnan).
Distr. Yunnan and Shan States.
3. *Pyrrhula erythaca owstoni* Rothschild & Hartert. Formosan Bullfinch.
1907.-See anteà.
Distr. Confined to the mountains of Formosa.
4. *Pyrrhula erythaca wilderi* Riley. Wilder's Bullfinch.
1918.-*Pyrrhula erythaca wideri* Riley, Proc. Biol. Soc. Washington,
Vol. 31, p. 33, May 16, 1918 (Eastern Hills about sixty miles
east of Peking, China—♀ ad., Feb., 1917).
1921.-*Pyrrhula erythaca taipaishanensis* Rothschild, Nov. Zool.,
xxviii, p. 63(Tai-pai-shan, Tsin-ling Mts., China).
Distr. China: "Chihli (winter. resident ?). Shensi (resident)" (La
Touche).

Pyrrhula nipalensis-group.

1. *Pyrrhula nipalensis nipalensis* Hodgson. Brown Bullfinch.
1836.-*Pyrrhula nipalensis* Hodgson, Asiat. Res., xix, p. 155(Nepal).
Distr. "The Himalayas from Gilgit to Eastern Assam" (S. Baker).
2. *Pyrrhula nipalensis victoriæ* Rippon. Mount Victoria Bullfinch.
1906.-*Pyrrhula victoriæ* Rippon, Bull. B. O. C., xvi, p. 47 (Mt.
Victoria, Chin Hills).
Distr. "At present known only from Mt. Victoria and adjoining
hills"(S. Baker).
3. *Pyrrhula nipalensis waterstradti* Hartert. Malay Bullfinch.
1902.-*Pyrrhula waterstradti* Hartert, Bull. B. O. C., xii, p. 69,
April 28, 1902 (Mt. Tahang, 5000—7000 feet, Eastern Malay
Peninsula, Oct., 1901),
Distr. "The mountains of Perak, Selangor and Pahang, never below
an elevation of 4500 feet"(Robinson).

4. *Pyrrhula nipalensis ricketti* La Touche. Fohkien Bullfinch.
 1905.-*Pyrrhula ricketti* La Touche, Bull. B. O. C., xvi, p. 21, Nov.
 1, 1905 (mountains of N. W. Fohkien, S. E. China).
 Distr. S. E. China: "N. W. Fohkien (resident). N. E. Kwangtung
 (resident?)" (La Touche).

Mr. Stuart Baker says that "birds from these parts seem hardly separable [from *nipalensis*] though they are perhaps a trifle darker."

5. *Pyrrhula nipalensis uchida* Kuroda. Uchida's Bullfinch.
 1916.-See anteà.

Distr. Confined to the mountains of Formosa.

I have examined some skins of *owstoni* (with so-called "*arizanica*"), *wilderi* (3 examples in my collection), *waterstradti* (examined in the Raffles Museum, Singapore), *ricketti* (examined in the Tring and Shanghai Museums) and *uchidai*; but I have not yet seen typical *erythaca*, *altera* and typical *nipalensis* and *victoriae*. Although I am in the above circumstances, I have made out an artificial key for the forms of *erythaca* and *nipalensis* which would be of some use for reference. This key, however, is carefully made out by making use of the descriptions of all the forms; and what has thus finally been arrived at is the following conclusive key.

Key to species and subspecies of *erythaca* and *nipalensis*.

1	{	Feathers round the base of bill velvety black; innermost tertiary not edged with red or yellow on the outer web (species <i>erythaca</i>)	2
		Feathers round the base of bill brown or greyish-brown; innermost tertiary edged with red (♂) or yellow (♀) on the outer web (species <i>nipalensis</i>)	5
2	{	Breast, upper abdomen and flanks orange-red in males; back greyer in females	3
		Sides of breast faintly washed with rosy-red or breast (rarely ?) paler orange-red in males; back and underparts dull rufous-brown in females <i>erythaca owstoni</i> .	
	{	Orange-red of underparts paler; a broad black band round the base of bill; white on the forehead narrower; females duller	

- 3 { above and browner below; wing ♂♂ 82—84mm. (according to S. Baker).....4
- 3 { Orange-red of underparts darker; a narrow black band round the base of bill; white on the forehead wider; females greyer above and below; wing ♂ 78, ♀♀ 73. 5, 74mm. (according to La Touche).....*erythaca wilderi*.
- 4 { Upper parts paler grey; breast paler red in males, paler brown in females.....*erythaca erythaca*.
- 4 { Upper parts darker grey; breast deeper and richer red in males, darker and more brown in females*erythaca altera*.
- 5 { Central rectrices always with a distinct central streak of white in both sexes*nipalensis uchidai*.
- 5 { Central rectrices metallic bronze; a white patch under the eye medium or smaller.....6
- 5 { Central rectrices metallic purplish; a white patch under the eye much larger.....*nipalensis waterstradti*.
- 6 { Crown and nape blackish brown, each feather margined with light ashy-brown; a white patch under the eye in both sexes larger and purer.....7
- 6 { Crown and nape grey-brown, subterminally blackish-brown, each feather margined with pale grey-brown; a white patch under the eye in both sexes smaller and duller.....*nipalensis ricketti*.
- 7 { Above ashy-brown, tinged with chocolate colour.....*nipalensis nipalensis*.
- 7 { Above greyer, less tinged with chocolate colour.....*nipalensis victoriae*.

Principal literature not cited above.

- 1926.-Stuart Baker; Fauna of British India, Birds, iii, pp. 109, 111-114, March, 1926.
- 1927.-La Touche: A Handbook of the Birds of Eastern China, i, pt. iv, pp. 307—310, Aug., 1927,
- 1928.-Robinson: The Birds of the Malay Peninsula, ii, pp. 268—269, pl. 23[*P. n. waterstradti*], July, 1928.
- 1930.-Stuart Baker: Faun. Brit. Ind., Bds., vii, p. 227, March, 1930.
- 1935.-Yamashina, Marquis: On *Pyrrhula uchidai* and *P. owstoni*. "Tori," vol. ix, no. 41, pp. 1—6. (In Japanese.)

臺灣産ウチダウソ雌(下)雄(上)

A pair of *Pyrrhula nipalensis uchidai* Kuroda

of Formosa. $\frac{7}{8}$ nat. size.

黑田長禮氏原圖
横山慶次郎氏筆

臺灣産ウチダウソ雌(下)雄(上)
A pair of *Pyrrhula nipalensis uchidai* Kuroda
of Formosa, $\frac{7}{8}$ nat. size.