A brief note on distribution of Buller's Shearwater,
Puffinus bulleri, in Japan and the adjacent seas

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The Buller's Shearwaters, *Puffinus bulleri*, breed only on the Poor Knights Islands of northern New Zealand. They are trans-equatorial migrants. Bourne (1962) suggested that the species takes a circular route up the west side of the Pacific, east in the trades, and then down the east side, possibly returning along the southern subtropical convergence or further south in the westerlies. However, the extent and regularity of such wanderings in the west side of the Pacific, including Japan, has remained undocumented.

Recently Dr. Haruo Ogi observed a good number of the species in the northwestern Pacific, and we also obtained one specimen from the northwestern Pacific. This paper includes these new records, and their distribution and migration in Japan and the adjacent seas are briefly discussed based on the summarized records.

Distributional records of Buller's Shearwater in Japan and the adjacent seas

Table 1 summarizes the status of Buller's Shearwater in the study area, and these records are presented by area in the short below.

Northwestern Pacific (excluding Japan)

Buller's Shearwaters were not known to occur in the adjacent seas of Japan until 1951 when one bird was collected by Sleptsov on 17 September, which was the first record of the species from the USSR, and after that three birds were also obtained by Sleptsov on 14 and 18 September 1954. They were found near Kunashir and O. Iturup, S. Kuriles. All four birds were young males (Sleptsov 1955, 1960, quoted in Nechaev 1969). On July 1954, Kuroda (1955) observed 17 birds flying by, singly or in scattered groups of two or three, and collected two females at 240 miles southwest of O. Iturup, S. Kuriles. On 17 June 1977, one male, wt. 345 gm., was collected by the second author at 37° 59' N, 166° 05' E, east of northern Honshu, which was attracted by the light and landed on a ship at 22.00 hours. On 29 July 1978, Dr. Ogi observed a good number of the species between 44° 21' N, 173° 12' E and 44° 19' N, 172° 57' E, and photographed them. About 50 birds are seen in the picture (Plate 3).

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Honshu

On 19 October 1976, two birds were observed off northern Honshu by Morioka and Ichida (1977). The distinguishing characters are plainly seen and photographed. This is the first record of the species from Japan.

Bonin Islands

There are two sighting records off Chichijima, Bonin Islands, in November 1968 (Takano *et al.* 1970), and in July 1969 (Hasuo 1970), both of which must be considered tentative.

Buller's Shearwaters differ from the pale phase Wedge-tailed Shearwaters (*Puffinus pacificus*) in having boldly patterned upperparts, dark cap, and entirely white underparts (Harper and Kinsky 1978). However, unless distinctive field characters were clearly seen and recorded, there must necessarily remain an element of doubt about some of the sightings shown in Table 1. They are likely to be confused with the light phase Wedge-tailed Shearwaters at sea. In fact, a photograph shown as a Buller's Shearwater (in frontispiece of the Birds-list of Tokyo Metropolis), which was taken 18 November 1968 off Chichijima, Bonin Islands, probably shows a light phase Wedge-tailed Shearwater. The pelagic distribution of Buller's Shearwater is still poorly known, but they may have occurred more frequently in the study area than records indicate, since their similarity to the light phase wedge-tailed Shearwaters may have caused them to be overlooked.

Note on migration

The major migration route of the west side of the Pacific through the tropics has not yet been discovered, but the July records of Kuroda (1955) off the S. Kuriles and the June and July records from the northwestern Pacific reported here, may indicate that this species takes a circular route up the west side of the Pacific as suggested by Kuroda (1957), and reaches the northern subtropical convergence (Nakamura and Ogi, Unpubl.). The migration route of the east side of the Pacific suggested by Bourne (1962) seems to be supported by the recent sighting by Bruyns (1965) and Wahl (1975) of this species.

The collectings and sightings of the species in September and October around Japan indicate that some individuals still spend at least part of the breeding season away from the breeding grounds, since most birds return to New Zealand waters in early September (Vooren 1972) and leave in early May, and eggs are laid on the Poor Knights Islands during late November and early December with a peak on 29 November (Bartle 1974). These birds must be non-breeders.

Before finishing this short note, we wish to express our sincere thanks to Dr. Haruo Ogi of Hokkaido University for making valuable information available to us, and to Mr. Takashi Ohara of Heiwagakuen High School for translating Russian into Japanese.

Table 1. Summary of recent pelagic records of Buller's Shearwater from the northwestern Pacific

Location	Date	Remarks	Source
Off Kunashir and O. Iurup, S. Kurile	17 Sept. 1951	One male collected	} Sleptsov 1955, '60
240 miles southwest of O. Iurup, S. Kuriles	14 & 18 Sept. 1954	Three males collected	
	9 July 1954	17 birds; distinguishing characters noted and two females collected at 42° 10'N, 149° 57'E, and 41° 12'N, 149° 44'E, respectively	Kuroda 1955
Off northern Honshu at 38° 25'N, 149° 16'E	2 July 1964	One bird	} Mochizuki 1969
at 38° 55'N, 149° 20'E	2 July 1964	One bird	
at 39° 14'N, 148° 50'E	4 July 1964	One bird	
at 39° 13'N, 148° 50'E	4 July 1964	Two birds	
at 39° 13'N, 148° 47.5'E	4 July 1964	One bird	
Off Chichijima, Bonin Islands	18 Nov. 1968	One bird; distinguishing characters noted, but considered tentative	Takano <i>et al.</i> 1970
Off Chichijima, Bonin Islands	19 July 1969	One bird; nominal record, no distinguishing characters noted	Hasuo 1970
Off northern Honshu	19 Oct. 1976	Two birds; distinguishing characters plainly seen and photographed. Valid record	Morioka & Ichida 1977
Open ocean at 37° 59'N, 166° 05'E	17 June 1977	One male collected	
Open ocean at 44°N, 173°E	July 1978	Over 50 birds observed and photographed	

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付記 小笠原近海における記録について

「東京都産鳥類目録 (1975年, 39頁) に小笠原近海からのミナミオナガミズナギドリの観察記録 2 例がある。すなわち「1968. 11. 18 父島沖 1 羽」と「1969. 7. 19 父島沖 1 羽一 (蓮尾)」の 2 例である。前者には「証拠写真あり: 野鳥 No. 268 にオナガミズナギドリとして報告されている写真の 1 つ」という注書が付記されている。これは柳澤紀夫氏が野鳥 34 巻 1 号 (通巻 268 号) 口絵にオナガミズナギドリとして発表された 2 枚の写真のうち上段のものを指している。この鳥の体下面が撮影されているが、写真は鮮明で同定に充分耐え得るべきである。

ミナミオナガミズナギドリの翼下面はほとんど白色である (plate 3 参照)。オナガミズナギドリでは翼下面雨覆部と初列風切基部は白いが、他は暗褐色で翼下面は厚く顕著に縁どられる。個体によって濃淡の差があるが、翼下面付根付近も暗灰色である。写真からこの鳥がミナミオナガミズナギドリでないことは明らかである。オナガミズナギドリ淡色型と思われる。

小笠原近海からのミナミオナガミズナギドリの記録をここではすべて参考記録として扱ったが、本種がこの近海を通過するかあるいは岩島が滞留することは充分考えられる。小笠原に繁殖するオナガミズナギドリのうち淡色型の占める比率は 99% 以上 (King, 1974 *Smithsonian Contr. Zool.* 158, p. 54) の高率である。従って特に翼下面付根付近が淡い個体がミナミオナガミズナギドリと混同される恐れがある。ミナミオナガミズナギドリには体上面に特徴的な M 斑がでることでオナガミズナギドリと区別できるが、野外識別には細心の注意が必要である。なお蓮尾 (1970, 195 頁) の報告には観察年月日が明記されていないが、「東京都産鳥類目録, 39 頁」の記録と同一と判断して表-1 で 1969. 7. 19 1 羽 蓮尾 1970 とした。

写真原版を心よく貸与下さり検討の機会を与えて下さった日本鳥類保護連盟の柳澤紀夫氏に お礼申しあげる。

日本近海におけるミナミオナガミズナギドリの分布について

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主として日本近海におけるミナミオナガミズナギドリ (*Puffinus bulleri*) の分布状況を把握するために過去の記録に検討を加えて要約し、あわせて北太平洋北西部海域における最近の観察及び採集記録を報告し、特に渡りとの関連でこれらの分布記録について討議した。

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Buller's Shearwater, *Puffinus bulleri*, and its flock in the northwestern Pacific, July 1978.
(Photos by H. Ogi)