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REMARKS ON THE TAXONOMY OF THE AUSTRALASIAN HARRIER (*Circus approximans*)

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INTRODUCTION

There has been considerable confusion among New Zealand ornithologists about which species and subspecies names to use for the Australasian Harrier *Circus approximans*. Since Vaurie's (1965) work on the genus *Circus* was published most authors outside New Zealand have referred to the Australasian Harrier as a subspecies of the European Marsh Harrier *C. aeruginosus*. That is, the Australasian Harrier has been named *C. aeruginosus gouldi*. However, the Australasian Harrier was referred to as *C. approximans gouldi* in the "Annotated checklist of the birds of New Zealand" published in 1970, and in all other scientific works published in New Zealand up to and including 1979. Similarly, the Fiji Harrier has been named *C. aeruginosus approximans* by workers outside New Zealand and referred to as nominate *C. approximans approximans* by New Zealand ornithologists. More recently, Amadon (1978) has provided convincing evidence that *C. approximans* should be retained as a full species and he included it as one of the five component species (= allospecies) of a marsh harrier superspecies.

The members of the marsh harrier complex range through north-western Africa, western and northern Eurasia to Japan, New Guinea, Australia, New Zealand and some islands of the South-west Pacific and the Indian Ocean (Vaurie 1965). The points of contention in this distribution and the recent changes in nomenclature that have occurred are discussed. Data are also presented demonstrating that the two current subspecies of *C. approximans*, nominate *approximans* of Polynesia and *gouldi* of Australasia, are indistinguishable and are therefore not valid.

SPECIES

Within the marsh harrier complex, the plumage coloration of the adult male harriers from eastern Asia (*C. spilonotus*) and central and western Europe (*C. aeruginosus*) is so sharply differentiated that they have long been considered separate species. This separation is important taxonomically because Brown & Amadon (1968: 382) stated that if these two harriers are not distinct species then all other members of the marsh harrier complex, including the Australasian Harrier, are subspecies of the European Marsh Harrier (*C. aeruginosus*). Vaurie (1965: 205) pointed out that where these two taxa come into contact in eastern Siberia and western Mongolia they interbreed. Whether this contact area should be considered a zone of full intergradation or alternatively and conversely, an area of partial hybridisation, is an unresolved point of contention. Vaurie (1965) believed that full intergradation occurs and that the lack of reproductive isolation strongly suggests the two taxa are conspecific. However, Amadon (1978) referred to possible 'polymorphs' where the taxa meet and suggested that only partial hybridisation may occur.

Amadon (1978) raised two further points of interest. Firstly, he stated that the conspecific harriers of Mauritius and Madagascar (*C. maillardi*) are geographically isolated and morphologically distinct from *C. aeruginosus*. Secondly, he noted that where two other species of the marsh harrier complex are sympatric in lowland New Guinea, interbreeding has not been recorded. These species are *C. spilonotus* and *C. approximans*.

Further study is needed of all three points outlined above, but I believe Amadon's (1978) cautious proposal that *C. approximans* be considered a full species and a member of a marsh harrier super-species is at present the only acceptable solution.

SUBSPECIES

In establishing a criterion for differentiating subspecies I have followed Amadon's (1949) definition of "75 per cent of a population must be separable from all (99+ per cent) of the members of overlapping populations to qualify as a subspecies."

In the past, various attempts to define subspecies of the Australasian Harrier have been made, mainly based on size. To date Amadon's (1941) investigations, from which two subspecies were distinguished from five previously described forms, is the most widely accepted work. The subspecies he defined were: *C. approximans approximans* (Fiji Harrier) and *C. a. gouldi* (Australasian Harrier). Amadon (1941) was definite about his criteria when he said that the smaller size of *C. a. approximans* seemed to be the only valid character for distinguishing it from *C. a. gouldi*. During his study he examined 124 skins of *C. approximans* and, although many of these were damaged or ill-prepared, he stated that they "made it possible, perhaps for the first time, to investigate the alleged racial variations in colour in this species.

None seems to exist. Statements to the contrary have presumably been based on differences due to age, sex, or individual variation." This stance was slightly modified by Brown & Amadon (1968: 383) who stated that *C. a. gouldi* was much larger than *C. a. approximans* and rather darker above and more heavily streaked below. However, Amadon (1978) reaffirmed his earlier view when he again stated that the subspecies differed only in size.

Following the general acceptance of Amadon's (1941) distinction of two subspecies, there was speculation among ornithologists as to why the measurements of wing and tail length of harriers from Norfolk Island and the Kermadec and Chatham Islands should have fallen into the *C. a. approximans* range, when the islands lie much closer to Australia and New Zealand where *C. a. gouldi* is resident.

As the major criterion for retaining the subspecies is still size differences, a comparison of the measurements taken by Amadon (1941) with those available today is needed to test his classification. In reference to this point, Oliver (1955) stated that "there is no good evidence for subdividing the species either on size or on coloration. . . Some of the ranges in size overlap." Although he rejected Amadon's (1941) classification, Oliver (1955) did not provide the necessary data to support his statement.

In Tables 1 and 2, I have summarised the available data on wing and tail length of *C. a. gouldi* and *C. a. approximans*, including measurements I obtained from the Fiji Museum, the National Museum of New Zealand and the National Museum, Melbourne. The museum measurements are referred to in the tables as "museum data." Because Amadon's (1941) data on *C. a. gouldi* were rather scanty he did not determine averages. However, this stance also was modified by Brown & Amadon (1968: 383), who presented the mean values and ranges, and so I too have included them.

The range of measurements of wing and tail length that Amadon (1941) took of *C. a. approximans* and *C. a. gouldi* overlapped very little, but note the small sample of *C. a. gouldi*. As may be seen in Tables 1 and 2, this is not what has been found by other workers: the measured ranges of wing and tail length of the subspecies overlap completely, and there is of course no possibility of separating 75% of Polynesian harriers from all (99+%) of Australasian harriers. Furthermore, the mean measurements of most samples are similar, except Amadon's (1941) of *C. a. gouldi* and Carroll's (1970) inexplicably low mean wing length of female *C. a. gouldi*. Carroll (*in litt.*) is unable to check this value as the original data are no longer available.

I agree with Oliver (1955) that there is no valid reason to distinguish subspecies of the Australasian Harrier based on differences in size, or on differences in colour, as Amadon (1941) reasoned. I therefore propose that the previously defined subspecies be combined under the nominate form: *Circus approximans* Peale 1848.

TABLE 1 — Male harrier measurements

Reference	Classification	Wing length (mm)			Tail length (mm)		
		Mean	Range	No	Mean	Range	No
Amadon (1941)	<i>C. a. approximans</i>	403	392-412	20	231	222-239	27
Baker-Gabb (museum data)	<i>C. a. approximans</i>	403	397-410	7	228	216-235	7
Amadon (1941)	<i>C. a. gouldi</i>	419	410-425	7	240	234-252	8
Carroll (1970)	<i>C. a. gouldi</i>	402	381-429	58	231	211-251	61
Fox (1977)	<i>C. a. gouldi</i>	408	390-430	22	229	220-240	22
Baker-Gabb(1978)	<i>C. a. gouldi</i>	404	385-425	95	225	195-240	95
Robertson(1978)	<i>C. a. gouldi</i>	399	382-412	19	230	210-240	22

TABLE 2 — Female harrier measurements

Reference	Classification	Wing length (mm)			Tail length (mm)		
		Mean	Range	No	Mean	Range	No
Amadon (1941)	<i>C. a. approximans</i>	423	418-430	4	247	240-252	10
Baker-Gabb (museum data)	<i>C. a. approximans</i>	409		1	234		1
Amadon (1941)	<i>C. a. gouldi</i>	436	430-444	6	254	249-259	6
Carroll (1970)	<i>C. a. gouldi</i>	408	390-455	66	239	224-258	70
Fox (1977)	<i>C. a. gouldi</i>	428	412-450	29	244	230-255	27
Baker-Gabb(1978)	<i>C. a. gouldi</i>	423	400-440	107	236	214-257	107
Robertson(1978)	<i>C. a. gouldi</i>	422	405-435	21	244	230-260	25

Under this classification, arguments about the origin of the harriers on Norfolk Island, the Kermadec and the Chatham Islands become unprofitable. A combination of the data of Amadon (1941), Oliver (1955), Brown & Amadon (1968) and Kinsky (1970) gives the known range of *C. approximans* as: south-eastern New Guinea, northern, eastern and southern Australia, Tasmania, New Caledonia, New Zealand, Chatham, Society, Tonga, Fiji, New Hebrides and Loyalty Islands, Wallis (Ueu) Island, a regular visitor to the Kermadec Islands, Norfolk Island and Lord Howe Island and straggling to Samoa.

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SHORT NOTES

MANY ANTARCTIC PETRELS AROUND FOVEAUX STRAIT

In normal years, Antarctic Petrels (*Thalassoica antarctica*) are rarely seen, but towards the end of winter 1978 there were unusual numbers from Preservation Inlet to Stewart Island.

Roy Milford, who fishes these waters, passed on these comments to me. "Three or four have been round every fishing boat; and altogether there must have been some hundreds. It is nice to have a new bird around. They are very tame, the tamest seabird of all. In fact, you can reach down and pick them off the water. They seem completely fearless. Near the boats they sit alongside the Cape Pigeons (*Daption capense*) eating scraps, and the Cape Pigeons bully them. The Antarctic Petrels appeared in such numbers at the beginning of September. Coinciding with their arrival was an unusual abundance of octopus."

Roy Milford, with 70 pots, added that normally he would get three or four octopus per daily round, but that in 1978 he was getting 20 per day and other crayfishermen were reporting similar numbers.

Any connection ?

MAIDA BARLOW, 38 Filleul Street, Invercargill.



ARCTIC SKUAS AT SEA

On 1 Nov. 1979 at 34° 11'S 177° 07'E, seven Arctic Skuas (*Stercorarius parasiticus*) were seen. They were in a loose flock spread over a front of about 100 yards and between 50-150 feet high. The birds were on a course of about south-west and were flying at a speed estimated to be about 20-25 knots.

JOHN JENKINS, 14 Lochiel Road, Remuera, Auckland.