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THE *CATHARACTA* SKUAS (AVES: LARIDAE) OCCURRING IN SOUTH AFRICAN WATERS

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TAXONOMY

The purpose of this paper is to show cause why a checklist of South African birds should contain the following entries by reporting on specimens of *Catharacta* preserved in South African museums examined in the light of Devillers's (1977) elucidation of the complex of Great Skua forms. In the first place, I support the recognition of the genus *Catharacta*, mainly on the grounds that the juvenal plumages of the three species of *Stercorarius*, with which *Catharacta* is often synonymized, are extensively barred below, whereas there is no barring in the juvenal plumage of any *Catharacta* form. Juvenal barring, which does not occur elsewhere in the Laridae (or the Charadriiformes as far as I am aware), is clearly a derived character state which distinguishes *Stercorarius* from *Catharacta*. *Catharacta* is thus primarily a southern hemisphere breeding genus while *Stercorarius* is purely Holarctic in its breeding season. The two genera may be properly placed as the Stercorariinae, and the elaboration of the rhamphotheca of the bill may be conveniently noted as a derived character state which defines them within the Laridae, and, indeed, the Charadriiformes, since they alone possess it.

Family LARIDAE Vigors
Subfamily STERCORARIINAE G. R. Gray
Genus **CATHARACTA** Brünnich

Catharacta Brünnich, *Ornithologia Borealis*, 1764, p. 32. *Type*, by subsequent designation by Reichenbach, *Av.Syst. Nat.*, 1852, p. v, *Catharacta skua* Brünnich, 1764.

[*Price* R1,50 *nett*]

CATHARACTA MACCORMICKI (Saunders) South Polar Skua.
Stercorarius maccormicki Saunders, *Bull.Brit.Orn.Club*, vol. iii, 1893, p. xii: Possession Island, Victoria Land, Antarctica.

Breeds Antarctica and South Shetlands: non-breeding visitor to north Pacific, secondarily to northern Indian Ocean. Also North Atlantic.

Two obtained off Cape St Francis, Cape Province, 16 May, 1963. Presumed to be an occasional visitor passing through South African waters.

CATHARACTA ANTARCTICA (Lesson) Subantarctic Skua.

Breeds on the Antarctic Peninsula and all subantarctic islands. Non-breeders wander widely in all southern seas.

Catharacta antarctica madagascariensis (Bonaparte)

Stercorarius antarcticus a. *madagascariensis* Bonaparte, *Conspectus Generum Avium*, vol. ii, 1857, p. 207: Madagascar.

Catharacta antarctica lönnbergi Mathews, *Novit.Zool.*, vol. xviii, 1912, p. 212: New Zealand seas. New synonym.

Breeding range that of the species except for the Falkland and Tristan island groups. Non-breeding range probably that of the species.

Regular non-breeding visitor to South African coastal waters. Present throughout the year but commonest April to September. Extra-limitally in African coastal waters north to at least Annobon Island in the west, and, apparently, to Egypt in the east, but eastern sight records do not distinguish between this species and the dark brown phase of *C.maccormicki*.

Devillers (1977) has shown that three species of *Catharacta* occur in the southern hemisphere and that one form occurs in the northern hemisphere. This latter is *C.skua*, which is commonly assumed to have subspecies breeding in the south, but it is not at all clear with which of the three southern species it is supposedly conspecific. Devillers states that some individuals look very like *C.a.antarctica* and that the juvenal plumages are likewise very similar. But *C. maccormicki* and *C.chilensis* (Bonaparte (1857)) share with *C.skua* the development of distinctive and elaborate pale shaft-streaks to the nuchal feathers in the adult nuptial plumage, and *C.maccormicki* is the only southern form which regularly visits the northern hemisphere and thus could most easily establish a northern offshoot.

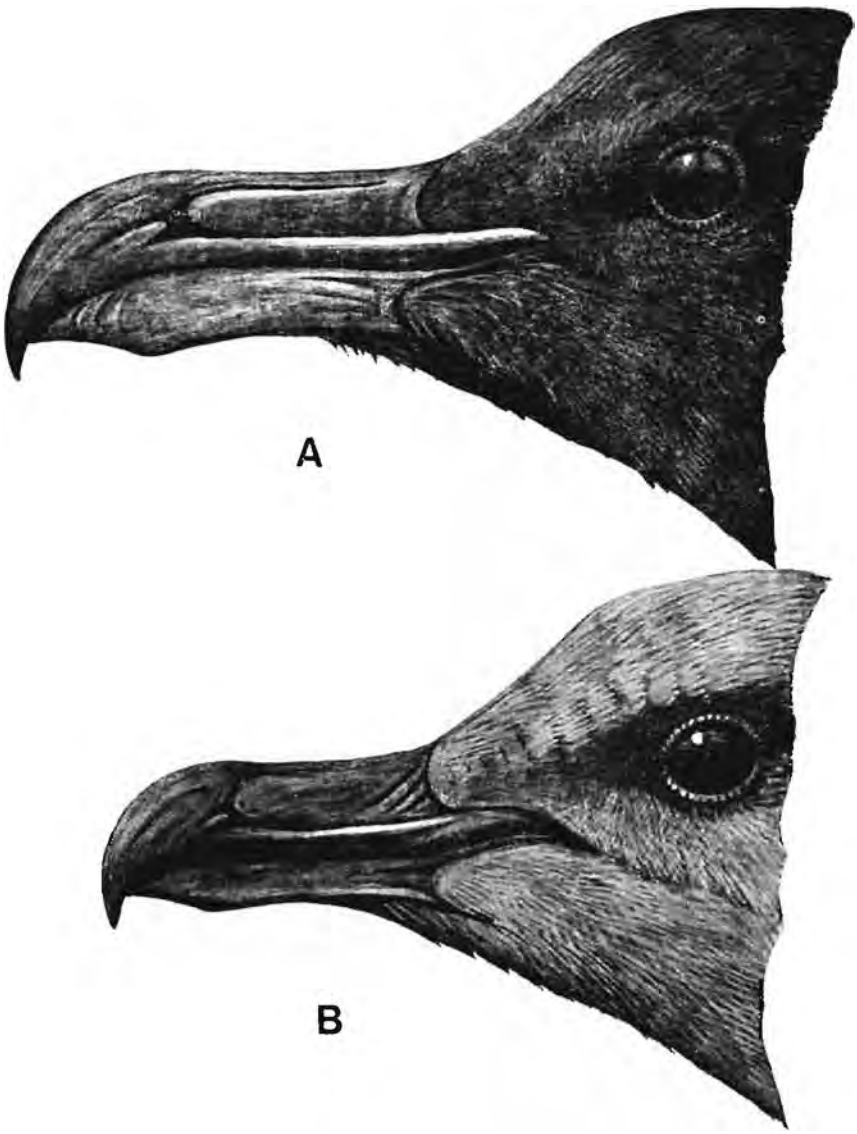

FIG. I

Heads of the two *Catharacta* spp. occurring in southern African waters.

A. *Catharacta antarctica madagascariensis* (Bonaparte).

B. *Catharacta maccormicki* (Saunders).

Note much smaller size of bill and difference in mandibular sculpture in *C.maccormicki* compared with *C.a.madagascariensis*.

Swales (1965) considers *C.skua* as derived from *C.chilensis*, while Hagen (1952) regards his *C.a.hamiltoni* as hardly separable from it.

We do not currently have the information to allow us to say what southern *Catharacta* is most closely related to *C.skua*, and to link it hopefully to one of them is to pretend to a knowledge which we do not possess. It also makes the biological species concept even more subjective than it need be. I therefore regard *C.skua*, the Bonxie or Great Skua, as a monotypic species restricted to the north-east North Atlantic in the breeding season. In the southern hemisphere there are two monotypic species: the Chilean Skua *C.chilensis* breeding on both coasts of southern South America, and the South Polar Skua *C.maccormicki* already mentioned, and the Subantarctic Skua *C.antarctica* with three subspecies: nominate *C.antarctica* (Lesson, 1831), breeding in the Falkland Islands and Patagonia, *C.a.hamiltoni* Hagen, 1952, breeding in the Tristan da Cunha Group, including Gough Island, and *C.a.madagascariensis* (Bonaparte, 1857) breeding on all other sub-antarctic islands, including the South Shetlands, and the tip of the Antarctic Peninsula, where it is sympatric with *C.maccormicki* at both places.

The type-locality of *C.maccormicki* is Possession Island (one of several in the southern seas) but its exact whereabouts is difficult to establish. Saunders (1893) added Victoria Land at 71° 14′ S., 171° 15′ W. This places it in the Ross Sea some 20° of longitude east of Victoria Land at that latitude. Watson *et al.* (1971) give the coordinates of this Possession Island as 71° 27′ S., 171° 08′ E., whereas the U.S. Board on Geographic Names in their *Gazetteer No.* 14, *Antarctica*, ed. iii, 1969, gives them as 71° 52′ S., 171° 12′ E. Both of these positions would make Possession Island an offshore island of Victoria Land. We may assume a *lapsus calami* in Saunders (1893) whereby he wrote 'W.' instead of 'E'.

Bonaparte's (1857) account of the skuas seems to have been very seldom consulted. Saunders (1876) alluded to it, though without full consideration of its contents, and nobody else seems to have considered it at all. Bonaparte recognized two genera in his Lestridinae (= Stercorariinae), *Stercorarius* Vieillot *nec* Brisson (= *Catharacta* Brünnich) and *Lestris* Illiger (= *Stercorarius* Brisson). At this point, it should be remarked that Saunders (1876) is a reliable guide to the nomenclatural tangles of last century. In *Catharacta* Bonaparte recognized two species, *catarractes* L., 1766, (= *skua* Brünnich, 1764) and *antarcticus* Lesson. Under the latter he recognized two varieties as follows:-

"*a.* madagascariensis, *Bp.Mus.Paris.* a Berniero, *ex Madagascar. Rostro elongato, robusto.*

b. chilensis, *Bp.Mus.Berol.ex Am.m. Rostro vix breviore* quam in europaeo, *potius graciliore quam robustiore.*".

The name *chilensis* has been in universal use ever since Saunders (1876) resurrected and endorsed it, but *madagascariensis* has been largely ignored. However, the proposal clearly mentions the large, heavy bill which distinguished the subspecies *lonnbergi* Mathews (1912) of Hamilton's (1934) and Devillers's (1977) revisions and accepted by virtually all workers, normally as a race of either *skua* or *antarctica*. The only form of *Catharacta* recorded from Madagascar in Milon *et al.* (1973) is *C.a.intercedens* Mathews, 1913 (proposed in a species *C.lonnbergi*), which was placed as a synonym of the race *lonnbergi* by Hamilton (1934). This synonymy is widely accepted. Nonetheless, the question should be reinvestigated since it would seem that true *lonnbergi* from New Zealand's subantarctic islands has elongated golden shafts in nuptial plumage (Falla (1937); Serventy in Crawford (1952)), whereas populations breeding on Kerguelen (the type-locality of *intercedens*), the Crozets and the Prince Edward Group only show this as an aberration. *C.a.clarkei* Mathews, 1912: South Orkneys, would also be a synonym of a restricted *madagascariensis*, which may also be smaller on average than New Zealand *lonnbergi*. Since the name *lonnbergi* is that of a subspecies and one virtually never regarded as a species I see no reason to seek its conservation at the expense of its senior subjective synonym, *madagascariensis*, particularly as the synonymy is not fully established. Most subspecies are of interest only to taxonomists who can readily appreciate the requirements of the Law of Priority.

I suggested above that *lonnbergi* may be separable from *madagascariensis* by its possession of golden shaft-streaks in nuptial plumage. This could be readily studied by means of photographs of brooding birds. The different islands may have mensurally distinct breeding populations but this cannot be elucidated until we have samples of birds shot off the nest, and immatures and non-breeding visitors are recognized and eliminated from comparison. The figures by breeding areas in Despin *et al.* (1972) and Barré (1976) show how far we are from achieving this. Failure to distinguish breeding adults from immatures and visitors from other areas has marred the work of Hamilton (1934) and Swales (1965), who seem to have thought that all birds obtained on Tristan da Cunha and Gough Islands were *C.a.hamiltoni*. It will be seen from Table I that both *C.a.hamiltoni* and *madagascariensis* have been obtained on Tristan da Cunha, the former being the form breeding there and the latter a non-breeding visitor, as it also is in South Africa. M. Jean F. Voisin, after a visit to the island in September, 1977, told me that both

forms were well represented there at the time of his visit. It is not possible to diagnose *hamiltoni* correctly when it is not appreciated that series of specimens or trapped birds are likely to be subspecifically composite. Similarly, I would suppose that foraging flocks of non-breeding birds seen in the Falkland Islands (*e.g.* Rowlands (1977)) are also subspecifically composite. There seems no reason to suppose that *C.a.madagascariensis* breeding in the Falkland Island Dependencies do not visit the Falkland Islands and join non-breeding members of the nominate race at temporarily superabundant food supplies.

SOUTH AFRICAN RECORDS

White (1965), following earlier workers, accepted the occurrence of *Stercorarius skua antarctica* and *S.s.lonnbergi* in South African waters. As the forms of *Catharacta* are now understood in the light of Devillers's very convincing revision, the arrangement adopted by White proves unsatisfactory. The genus and species questions and the subspecific nomenclature have been examined, and we may now proceed to ascertain what taxa have been obtained in South African waters. I have examined the material held by the Albany Museum in Grahamstown (AMG in Table I), the Durban Museum (DM), the East London Museum (ELM) and the South African Museum in Cape Town (SAM), and I am obliged to their Directors for the study facilities extended to me. Dr. A. C. Kemp, Ornithologist of the Transvaal Museum in Pretoria (TMP), has kindly communicated the measurements and localities of the small series held there. I find that two species occur in South African coastal waters, *viz.*, the Subantarctic Skua *Catharacta antarctica* regularly, particularly in winter, and the South Polar Skua *C.maccormicki* occasionally.

C.maccormicki has not been previously reported from South Africa, but it is represented in the East London collection by two specimens obtained off Cape St. Francis, Cape Province, on 16 May, 1963, by Capt. H. P. Goosen. Both are of the common bicoloured morph of which a very dark individual is illustrated on pl. I of *Cat.Birds Brit.Mus.*, vol. xxv, 1896. One is an adult female with golden shaft-streaks or needles on the nape and the other is an immature male lacking these streaks. Measurements and other data on them will be found in Table I. These specimens were examined by Mr. P. A. Clancey some years ago and he then determined them as *maccormicki*, but he did not publish his determination in view of the uncertainty then prevailing on what forms of *Catharacta* should be recognized and at what categorical level. Since *C.maccormicki* is a regular non-breeding visitor to the north Pacific and

has been obtained in the North Atlantic, and, more often, in the northern Indian Ocean (Devillers (1977)), occasional birds journeying elsewhere will continue to be observed and obtained in South African waters.

In Table I will be found details of all other South African taken *Catharacta*, and it is clear that all 23 are unequivocally *C.a.madagascariensis* (= *lonnbergi* as defined by Devillers), particularly in view of their great tarsus lengths. I now reject the alleged occurrence of nominate *antarctica* in South African waters as not supported by critically examined material, as well as being intrinsically unlikely since it seldom travels far from its breeding grounds and then does so towards the coast of Brazil. Likewise, there is no reason to suppose that it occurs in Africa north of South Africa. Virtually all dark brown skuas (not jaegers of the genus *Stercorarius*) to be found in our waters will prove to be *C.a.madagascariensis*, and the only exceptions will, I believe, prove to be the scarce plain dark brown morph of *C.maccormicki*.

By a bird occurring in South African waters I mean a bird which may be seen from the shore or from a boat from which land may still be seen. For practical purposes this area may be defined as South Africa's current 12 nautical mile territorial waters which are delimited from cape to cape, treating offshore islands as capes. That *C.a.madagascariensis* conforms to this definition is common knowledge: *cf.* from Layard (1867) to my personal sight records made from the South Pier, Durban, and Greenpoint, Cape Town. *C.maccormicki* probably conforms since it was obtained from a coastal trawler under the command of Capt. Goosen.

The dated records in Tables I and II fall in the period March to November. A specimen that probably no longer survives was obtained in February, 1894, in Algoa Bay, C.P., according to a catalogue in the Port Elizabeth Museum and Oceanarium. While *C. antarctica* may be seen at all times of the year around South Africa, their period of greatest abundance is April through to September (Liversidge (1959)), and this is supported by the dates in the two Tables as well as seven years seabird watching by my colleague, Mr. J. C. Sinclair.

Table II gives details kindly provided by SAFRING of African recoveries of *C.antarctica*. All were ringed in the Crozet and Prince Edward Groups, both well-known breeding stations of *C.a.madagascariensis*. These records nicely complement the locality data in Table I (see below). Most ringing recoveries have been from the west coast of Africa, whereas most specimens have come from the south-

east coast. This is because the East London Museum is the only South African museum to have made a serious attempt to collect seabirds as opposed to recovering wrecked birds or saving casual donations.

MISCELLANEA

It will be noted that the first Walvis Bay recovery in Table II is of a fledgling recovered two months later far to the north-west of Marion Island, a journey made against the prevailing westerly winds. *C.a.madagascariensis* are not just wind-drifted around the southern hemisphere. They must move freely and be willing to breed far from where they were born, since the race has a virtually circumpolar breeding distribution. The record of a nestling ringed in South Georgia on 14 January, 1964, and recorded as breeding on Ile de la Possession, Crozet Group, on 22 January, 1973, fully supports this view based on its accepted taxonomy, and it is unlikely to be the accidental occurrence Barré (1976) thought it might be.

Table II shows that at least two breeding populations of *C.a. madagascariensis* visit South African waters, and I see no reason to suppose that they are the only populations to provide visitors. As already remarked, the East London series is largely made up of collected specimens and it may be significant in this respect that while eight of their specimens (Table I) show active moult of the primaries, No. 10877 is in worn plumage and Nos. 10495, 15239 and KM 3427 (this last a wrecked bird) are in fresh plumage. It could be that the different moult cycles are proper to birds from different breeding areas, since it seems unlikely that so many successful breeders (66% of the series) would be collected on our south-east coast, when observation on Marion Island (A. J. Williams pers. comm.) shows that breeding birds are outnumbered by non-breeders, who moult there earlier in the year since they have no reproductive commitments. Hagen (1952) and Swales (1965) also regarded differences in the time of moult as indicative of different breeding populations.

The normal mode of moult of the primaries in *Catharacta* is the simple descending one. This pattern remains apparent even in the *C.maccormicki* from Showa in which the outermost primaries 8 - 10 are fresh, 7 is worn and 1 - 6 are old, *i.e.*, the moult was interrupted twice, once after No. 6 had grown and again after No. 7 had grown. The *C.a.madagascariensis* from off Kommetjie in active moult also shows interruption, this time after primary 8 had grown. The Stresemanns (1966) found that the descending mode was the normal one

in *C.skua* and that a second primary could be dropped and start regrowing before the preceding one was fully grown. This also applies in *madagascariensis*.

It is clear from Table II that elsewhere in Africa *C.a.madagascariensis* is a regular visitor to South West Africa (Namibia) (see also Lambert (1971), and Winterbottom (1971)) and that it has occurred at Annobon in the Gulf of Guinea, this being the most northerly record known to me on the western side of Africa. The sight record of several birds off Senegal on 20 May (Smith (1972)) cannot be placed to species at the present time, since it is more or less half way between the known non-breeding ranges of *C.skua* and *C. antarctica*, and the same applies to the bird seen on 23 March off the Gambia (Lambert (1971)). *C.a.madagascariensis* occurs, at least occasionally, on the coasts of Angola, four being seen in the Baia dos Tigres in the south on 25 September (Lambert (1971)). On the eastern side of Africa the position is more obscure. The most northerly specimen is the Zululand one in Table I, though there are sight records for Mozambique (Clancey (1971)) and Kenya (Mann (1976)). It has been obtained in Madagascar, its type-locality, and on Mauritius (Rountree *et al.* (1952)), but records from the Seychelles (Penny (1974)), the Comoros (Saunders (1876)), the northern Indian Ocean and the Red Rea (Mörzer Bruyns and Voous (1965)) seem to be all sight records. Since dark phase *C.maccormicki* have been obtained on the west coast of India (Devillers (1977)), we may presume that both forms occur throughout the western Indian Ocean and the Red Sea, with *madagascariensis* being the commoner.

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TABLE I

Collection, Mensural and Moult Data on South African held Specimens of *Catharacta*.

Locality	Date	Sex	Wing Length	Culmen Length	Tarsus Length	State of the Primaries	Source	
Catharacta maccormicki								
Cape St. Francis, C.P.	16.v .63	♀	390	48	67	Fresh	ELM	10507
Cape St. Francis, C.P.	16.v .63	♂♂	390	50	63	Fresh	ELM	10508
Showa, Antarctica @ 69° S, 40° E	25.i .60	♂♀	400	48	63	Interrupted	SAM	53552
At sea between SANAE and Cape Town	—.iii .71	♀	390	47	63	Normal	SAM	55975
Catharacta antarctica madagascariensis								
North of Leven Point, Zululand	4.iii .75	O	390	52	75	Fresh (still active)	DM	30735
Durban, Natal	20.ix .68	♀	385	56	80	Active	DM	24563
Near Durban	—.xi .65	♂	400	57	81	Old (salt-burnt)	DM	19632
Hamburg Beach, C.P.	9.ix .66	O	435	53	80	Fresh	ELM	KW3427
Great Fish Point, C.P.	31.vii .64	♀	395	54	79	Old	ELM	10877
Great Fish Point, C.P.	8.iv .69	♀♀	425	58	81	Active	ELM	13868
St. Croix Is., Algoa Bay, C.P.	3.viii.63	♀♀	420	54	80	Fresh	ELM	15239
Jeffreys Bay, C.P.	10.vii .58	♀♀	—	55	78	Active	ELM	5548
Jeffreys Bay, C.P.	10.vii .58	♂♀	415	57	83	Active	ELM	5549
Jeffreys Bay, C.P.	10.vii .58	♂♀	410	54	81	Active	ELM	5550
Jeffreys Bay, C.P.	20.vi .69	♂♀	400	53	75	Active	ELM	13992
Cape St. Francis, C.P.	2.vi .62	♀♀	425	58	82	Active	ELM	10132
Cape St. Francis, C.P.	2.vi .62	♀♀	415	52	79	Active	ELM	10133
Cape St. Francis, C.P.	24.iv .63	♀♀	420	54	80	Fresh	ELM	10495
Agulhas Banks, C.P.	25.viii.16	♀♀	410	—	74	Active	SAM	53625
False Bay, C.P.	—.vii .03	♀♀	420	55	77	Active	SAM	7312
False Bay, C.P.	—.viii.03	♀♀	—	56	81	Active	SAM	7455
60 km off Kommetjie, C.P.	22.x .59	♀	410	51	78	Active and interrupted	SAM	53424

TABLE I

Collection, Mensural and Moult Data on South African held specimens of *Catharacta*. — *continued*

Locality	Date	Sex	Wing Length	Culmen Length	Tarsus Length	State of the Primaries	Source
Cape Town	25.iv .08	♂	397	56	79	—	TMP 10778
Cape Town	23.iv .08	♂	395	58	77	—	TMP 10779
Table Bay, C.P.	29.iv .65	O	—	—	—	—	Layard 1867
Cape of Good Hope, C.P.	—	O	405	51	81	—	Hamilton 1934
South Africa	9.v .69	♂	415	58	75	Old	ELM 13942
Marion Island	24.xi .51	♂	425	56	77	Fresh	AMG —
Marion Island	—	♀	430	—	88	Fresh	AMG —
Marion Island	1948	O	420	59	77	Worn	SAM — (see Crawford 1952)
Marion Island	1.iii .66	♀	440	55	82	Worn	SAM 55485
Marion Island	15.v .71	O	395	58	76	—	TMP 34999
Marion Island	11.xii .51	♂	400	54	78	—	TMP 3218
Marion Island	1976	♂	408	56	76	Fresh	DM 31127
Tristan da Cunha	—.i.1946	O	402	54	78	—	TMP 25851
Tristan da Cunha	25.x .90	♀	390	—	76	Normal	SAM 53750
Tristan da Cunha	—.v .67	♀	400	55	78	Normal	SAM 55500
Catharacta antarctica hamiltoni							
Tristan da Cunha	24.x .90	♂	395	54	74		SAM 8190

TABLE II

African recoveries of ringed *Catharacta antarctica madagascariensis*

Place found	Date	Place ringed	Date	Remarks
Mossel Bay, C.P.	15.vii .75	Ile de la Possession, Crozet Group	30.xi.73	Found dead
Oranjemund, S.W.A.	15.viii.66	Marion Island	10.i .66	Found dead
Walvis Bay, C.P.	15.iii .57	Marion Island	14.i .57	Found dead
Walvis Bay, C.P.	18.iv .75	Ile de la Possession	30.xi.73	Controlled
Cape Cross, S.W.A.	25.vi .75	Marion Island	10.i .74	Found dead
175 km WNW of Cape Cross, S.W.A.	14.v .74	Ile de la Possession	13.ii .73	Barré 1976
Annobon Island	20.vii .66	Marion Island	10.i .66	Controlled

ADDENDUM

Bonaparte, in his original description of *S.a.madagascariensis*, draws attention to the dark brown colouration and heavy bill, characters which apply well to *C.a.lonnbergi*. However, Hartlaub, *Die Vögel Madagascars*, 1877, p. 380, gives the following measurements of the *Type* of *madagascariensis*: total-length 550, culmen 53, wing 376, tarsus 67, middle toe 40. The tarsal-length is the single most diagnostic character in discriminating *Catharacta* specimens, and a tarsus of 67 indicates *C.maccormicki*, for which taxon Devillers, *loc.cit.*, gives a range of 58,5-70,0, av. 63,8, whereas for *lonnbergi* he gives 71,5-85,0, av. 77,0. The wing-length also strongly suggests *maccormicki*. Devillers's figures for this structure are 373-412, av. 394 for *maccormicki*, and 389-442, av. 415 mm for *lonnbergi*. The culmen-length is too long for *maccormicki* if Hartlaub measured it from the feathering, but he may have used another method, probably from the base of the skull. Milne-Edwards and Grandidier, *Hist.Nat.Ois. Madagascar*, vol. i, 1879, also comment on the smallness of Bonaparte's *Type*.

Before effecting any nomenclatural adjustments necessitated by the ascription of the *Type* of Bonaparte's *S.a.madagascariensis* to the South Polar Skua, and in turn to the arrangement proposed in the above paper, it would seem desirable to have the *Type* re-examined and measured by a modern worker.

In the event of Bonaparte's *madagascariensis* ultimately proving to be a South Polar rather than a Subantarctic Skua, steps will require to be taken through the International Commission on Zoolo-

gical Nomenclature to have *Stercorarius maccormicki* Saunders, 1893, conserved and *S.a.madagascariensis* Bonaparte, 1857, suppressed under the plenary powers on the grounds of the wide acceptance by workers of *maccormicki* as the name of the South Polar Skua and the virtual *nomen oblitum* status of *madagascariensis*.

In the event of *S.a.madagascariensis* being confirmed as a South Polar Skua on re-examination of the *Type*, and the International Commission later conserving the name *maccormicki* and suppressing *madagascariensis* in so far as the Law of Priority is concerned, the names of the two *Catharacta* forms occurring in South African waters will stand as follows:

(*a*) CATHARACTA MACCORMICKI (Saunders), 1893

(*b*) CATHARACTA ANTARCTICA (Lesson)
Catharacta antarctica lonnbergi Mathews, 1912.

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