

Supplementary paper

**South African Airforce wildlife rescue: Cape fur seal pups (*Pinnipedia: Otariidae*) washed from Black Rocks, Algoa Bay, during heavy seas, December 1976**

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**This report documents a wildlife rescue operation along the Eastern Cape coast of South Africa in December 1976; and provides evidence that adverse weather conditions (heavy seas and gales) can have a negative impact on pup survival at Black Rocks seal colony, Algoa Bay. The report supplements a paper compiled for the World Wide Fund for Nature, ZA348 - part 10(a): Stewardson, C. L., 1999. Impact of the fur seal industry on the distribution and abundance of Cape fur seals, *Arctocephalus pusillus pusillus*, on the Eastern Cape coast of South Africa. *Transactions of the Royal Society of South Africa* 54(2): 217–245. Photographs presented in this study have been donated to the Cape Archives Repository, Roeland Street, Cape Town, South Africa (general photographic collection under references AG17747–AG17760).**

**Key words:** *South African (Cape) fur seal, Arctocephalus pusillus pusillus, seal pup mortality, storms, South African Airforce (SAAF), wildlife rescue, Algoa Bay*

The Cape fur seal, *Arctocephalus pusillus pusillus*, is South Africa's only endemic seal species. Approximately 1.5 to 2 million seals breed at 25 colonies distributed from Black Rocks (Algoa Bay) on the south-east coast of South Africa, to Cape Cross (Namibia) (Butterworth & Wickens, 1990).

Black Rocks (33°50'S, 26°15'E) is the eastern extreme of the Cape fur seal's breeding range. This small island rookery is located c. 9 km south of the nearest land (Fig. 10(b).1). Pup counts conducted over the past 23 years indicate that the Black Rocks population has decreased by 84%, i.e., c. 4 520 seals in 1974; c. 710 seals in 1997 (Shaughnessy, 1987; SFRI, unpubl. data). Several factors have contributed to the decline in seal numbers (Stewardson unpubl. data), including the influence of storms (Stewardson, 1999; present study).

Female Cape fur seals give birth to one pup every year between November and early December. At Black Rocks, the main breeding rock (the largest rocky outcrop) is the only one capable of supporting pups during heavy seas; the seals can only occupy c. 8 360 m<sup>2</sup> (Rand, 1972). When seal numbers increase on this small island, individuals are forced to less sheltered areas. If adverse weather conditions (heavy seas and gales) come early in the pupping season,

when pups are unable to swim proficiently, animals inhabiting the less sheltered areas are likely to be washed from the rocks. Although low lying areas are more prone to surging swells, large swells may also break over the main breeding rock which is 6 m above mean sea level (Stewardson, 1999).

Gale force winds and/or large swell waves ( $\geq 4$  m) during the pupping season were responsible for mass strandings (i.e., 50 to 300 pups) at Black Rocks seal colony in December 1974, December 1976, December 1977, January 1986 and December 1987. Three of these mass strandings occurred during warm phase *El Niño* years, i.e., 1976, 1986 and 1987 (Stewardson, 1999). The mass stranding of 1976 is documented below.

### December 4–5, 1976

Two yachtsmen, Mr Dave Wentzel and Mr Marc Pudifin, were washed from their Durban based vessel *Cloud Nine* on Saturday December 4, 1976 at the height of a violent east coast storm. Helicopters of 16 squadron, Port Elizabeth, were deployed to search for the missing men (Anonymous, 1976).

On the homeward leg of their rescue mission, air crew sighted numerous Cape fur seal pups stranded along the coastline between East London (32°58'S, 27°58'E) and Woody Cape (33°46'S, 26°19'E) (Fig. 10(b).1). High seas and swell had washed these pups off Black Rocks and carried them to the mainland. Strong south-south westerly winds of 69 kts (max. gust) were recorded at the Port Elizabeth weather station on Saturday, December 4 (G. Samson, pers. comm.). Swell height of 9 m (west-south west) and sea height of 5 m were recorded in the general vicinity on Sunday, December 5 (M. Grundlingh, pers. comm.). The pups were 1–2 weeks of age. Without milk, the pups would soon die.

Dr John Wallace, the director of the Port Elizabeth Museum, approached the South African Airforce (SAAF), requesting that the Port Elizabeth squadron assist with the mass stranding. Wallace requested that the surviving pups be located, and returned to Black Rocks by helicopter. After negotiating with headquarters in Pretoria, Major G. A. Haasbroek (acting officer commanding the Port Elizabeth Airforce Station) agreed to assist with rescue operations.

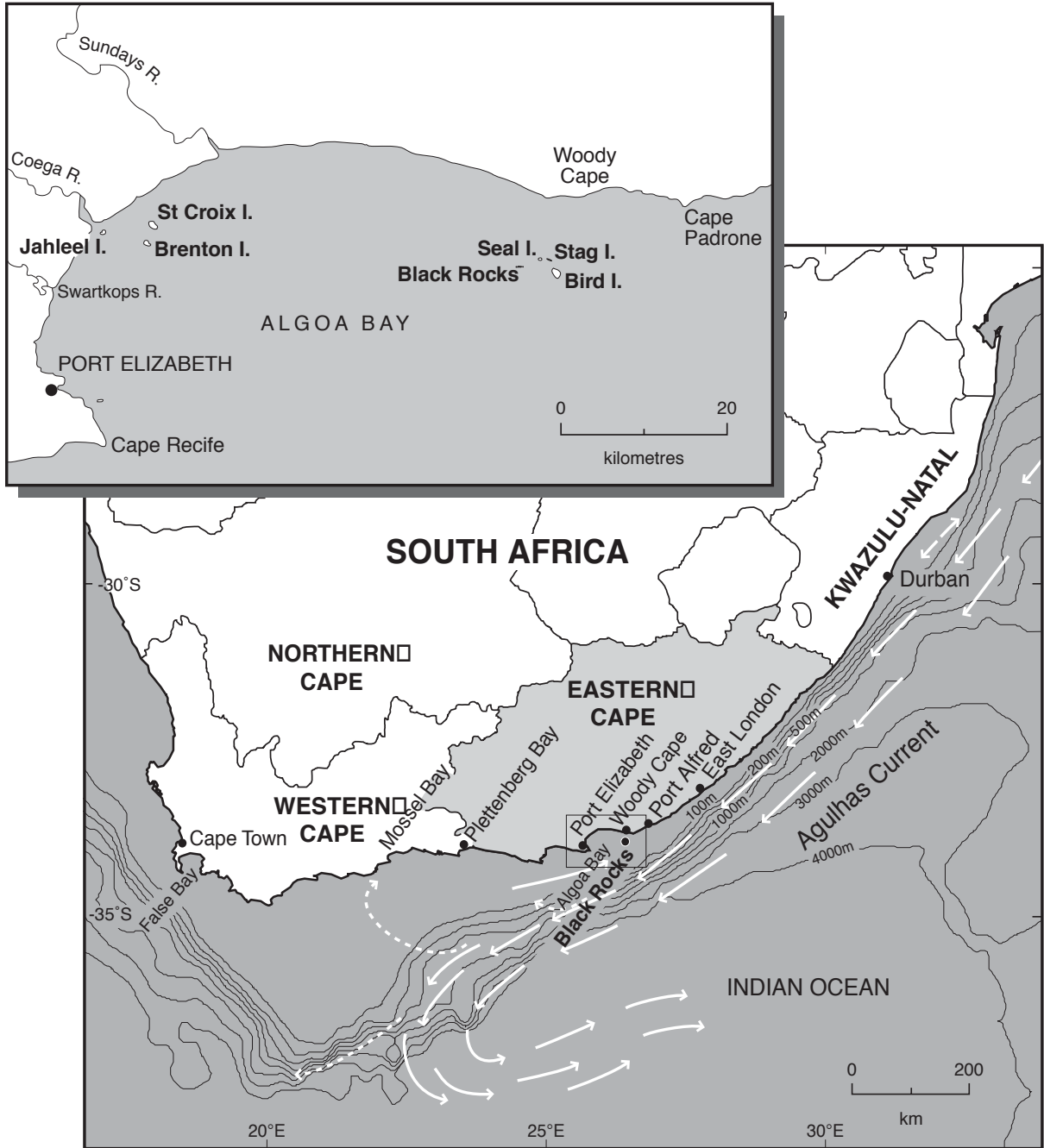


Fig. 10(b).1 Eastern Cape coast of South Africa indicating the position of Black Rocks seal colony, Algoa Bay, and the coastline where the seal pups were stranded, i.e., between Woody Cape and East London.

Figs. 10(b).2-6

Date: Wednesday, December 8, 1976.

Subject: Six stranded seal pups that had been rehabilitated at Port Elizabeth Oceanarium, were taken to the Port Elizabeth Airforce Station and then airlifted to Black Rocks.



Fig. 10(b).2 SAAF flight crew prepare to airlift seal pups from the Port Elizabeth Airforce Station. The crew had built boxes to secure the seal pups which they placed in the back the helicopter (Alouette III).



Fig. 10(b).3 Seal pups relax before being placed into the helicopter.



Fig. 10(b).4 Seal pup held over the water prior to release at Black Rocks.



Fig. 10(b).5 Pups gently dropped from the hovering helicopter about 20 m from Black Rocks.



**Fig. 10(b).6 Pups gently dropped from the hovering helicopter about 20 m from Black Rocks.** Numerous seals remain on the rocks indicating minimal disturbance from the helicopters.

### **December 7–8, 1976**

Two Alouette helicopters were deployed for the rescue mission. Three pilots (Lt. Theo Meyer, Lt. Eddie Brown and Lt. Chris Millbank), flight engineers and oceanarium officials searched the coastline from Port Elizabeth to East London over a two day period. The crew counted stranded seal pups and collected survivors.

A total of 80 live pups were located. These pups were airlifted to the Bird Islands and dropped about 20 m

from Black Rocks.

The reaction of the seals at Black Rocks to the approaching helicopters was initially one of panic. However, this gradually lessened after the first group of seals left the rocks (G. Ross, pers. comm.).

Twenty one of the 80 pups were tagged (double tagged) by Dr J. H. Wallace and S. Rutherford before release (Appendix 10(b).1). The pups were generally calm and easy to handle.

**Figs. 10(b).7-13**

**Date:** Wednesday, December 8, 1976.

**Subject:** Stranded seal pups retrieved from coastline between Woody Cape and East London by SAAF helicopters.



**Fig. 10(b).7 Winch hoist down: crewman lowered from helicopter (Alouette III) at Woody Cape.**  
The terrain in this area is inaccessible by four wheel drive.



Fig. 10(b).8 Crewman on the ground still attached to hoist cable.



Fig. 10(b).9 Seal pup retrieved by crewman.





Fig. 10(b).10 Helicopter hovers while waiting for crewman to return with stranded seal pup.



Fig. 10(b).11 Winch hoist up: crewman and pup winched to safety.



Fig. 10(b).12 Helicopter puts down on sandy beach to retrieve stranded seal pup.



Fig. 10(b).13 Twenty one seal pups were double tagged before being released at Black Rocks.

### December 14, 1976

Six days after the aerial pup count and rescue, an additional 20 pups were recovered from local beaches. Seven of these animals were retained by the Port Elizabeth Oceanarium. Thirteen were tagged (single tag in left flipper) and airlifted to Black Rocks (Appendix 10(b).1). Very few pups were seen on the island (G. Ross, pers. comm.).

Although a total of 100 stranded pups had been recovered since the storm, overall pup mortality was considerably greater. Many pups would have drowned or have been eaten by sharks. A percentage of those that made it ashore may have been slaughtered by beachcombers for food and/or their skins. Many of the pups would have been missed by observers, i.e., pups continued to haul-out on beaches after aerial counts had been conducted.

Figs. 10(b).14–15

Date: December 14, 1976.

Subject: Thirteen pups which had been rehabilitated at the Port Elizabeth Oceanarium were taken to the beach front (Humewood) to be airlifted to Black Rocks. All pups were tagged in the left flipper prior to release.



Fig. 10(b).14 Seal pups placed in Alouette III to be airlifted to Black Rocks.



Fig. 10(b).15 Pups gently dropped from the hovering helicopter about 20 m from Black Rocks.

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## December 22, 1976

It is not known how many of the orphaned pups were reunited with their mothers. At least two tagged seal pups which had been returned to Black Rocks on December 8 (A2255, A2256 and A2261, A2262) washed up again on the mainland, i.e., stranded at Port Alfred. One of these pups (A2255, A2256) was very weak and died soon after capture (G. Ross, pers. comm.).

## January 4, 1977

By January 4, 12 orphaned seal pups were based at the Port Elizabeth Oceanarium. The pups were fed a mixture of cod liver oil, sunflower seed oil, pilchards, glucose and vitamins (Appendix 10(b).2).

## February 11, 1977

Oceanarium staff informed the public that new homes must be found for the 12 orphaned pups which had not been returned to Black Rocks. The estimated cost of raising a single pup was R300; each pup had to be fed for at least seven months. Provisional plans were made to give seven of the pups to English firms. The Port Elizabeth Oceanarium kept the remaining five pups (Anonymous, 1977).

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Today, when mass seal pup strandings occur off the Eastern Cape coast, Port Elizabeth Oceanarium officials euthanase the stranded animals to prevent unnecessary suffering. For example, more than 200 stranded seals pups were put down in January 1988 (Anonymous, 1988).

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**Appendix 10(b).1 Identification numbers: 34 of the 93 stranded seal pups that were returned to Black Rocks were tagged before release**

<b>Tag in both left and right fore-flipper</b>	<b>Tag in left fore-flipper only</b>
1. A2276; A2277	22. A2290
2. A2278; A2279	23. A2275
3. A2280; A2281	24. A2229
4. A2282; A2283	25. A2230
5. A2284; A2285	26. A2231
6. A2286; A2287	27. A2232
7. A2288; A2289	28. A2233
8. A2291; A2292	29. A2234
9. A2293; A2294	30. A2235
10. A2251; A2252	31. A2236
11. A2253; A2254	32. A2237
12. A2255; A2256	33. A2238
13. A2257; A2258	34. A2239
14. A2259; A2260	
15. A2261; A2262	
16. A2263; A2264	
17. A2265; A2266	
18. A2267; A2268	
19. A2269; A2270	
20. A2271; A2272	
21. A2273; A2274	

**Appendix 10(b).2 Food formula for orphaned Cape fur seal pups**

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To 1 pint of warm water add:

- 2 heaped teaspoons lecithin
- 2 multivitamin tablets
- 1 calsuba tablets
- 2 teaspoons cod liver oil
- 1 teaspoon glycerin
- 240 ml sunflower seed oil
- 2 ml glucose
- 1 teaspoon salt (NaCl)

Place ingredients in a blender and mix for 2–3 minutes.

Add 4 pilchards and mix at high speed for at least 5 minutes. Pour mixture through a strainer into a bucket.

Then place 1 pint of warm water and 4 pilchards into the blender, mix thoroughly and pour through a strainer. Add this mixture to the mixture already in the bucket.

This formula is sufficient to feed two seal pups per day. Each pup is given 350 ml of formula twice daily.

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This formula was used by Port Elizabeth Oceanarium staff to feed orphaned Cape fur seal pups in 1976 and 1977 (Ross, pers. comm.); (1 litre = 1.76 pints).