

THE AUGUST 1981 SEABIRD (*PACHYPTILA* AND *HALOBAENA* SPP.) WRECK
OFF PORT ELIZABETH, SOUTH AFRICA

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Received 11 September 1981, accepted 26 October 1981

INTRODUCTION

During the period 14 - 29 August 1981 the eastern Cape coast of South Africa was subjected to alternating fresh southwesterly and southeasterly winds accompanied by overcast skies, rain and low temperatures. On 18 August (returning from a beach patrol) a single live prion *Pachyptila* sp. was collected at the low tide mark 200 m south of the Maitland River mouth. It was felt that due to prevailing weather conditions further birds were likely to be affected. Subsequent trips to various local beaches were made and additional birds were collected.

METHODS

Prions are notoriously difficult to identify in the field and for the inexperienced even in the hand. Thus all whole and part specimens encountered by myself were collected. A number of measurements following the methods described by Ainley *et al.* (1980) were taken. These included culmen length and width, unguis length, tarsal and toe length (to the nearest 0,2 mm) and wing length (mm). Mass was measured to the nearest g in fresh specimens. Additional material was supplied by J. Spearpoint, L. McGill and A. Ross. Other species which were considered to have been affected by the adverse weather conditions were also recorded.

RESULTS

The dates, beaches visited, distances covered, the species and number of each species recovered are presented in Table 1. A further 10 prions were recorded at Cape Recife on a monthly beach walk and have not been included in these results since they were unfortunately discarded (J. Spearpoint, pers.comm.). The plot of culmen length against bill width for all prions is shown in Fig. 1. Following the classification of Cox (1980), it is apparent from this plot that three prion species and two Blue Petrels *Halobaena caerulea* were present in the wreck. Specimens A and B were classified as immature Thinbilled Prions *P. belcheri* although their culmen lengths and widths were similar to Fairy Prion *P. turtur* (Fig. 2). Measurements are summarized in Table 2.

The wing length frequency distribution for the prion and Blue Petrel specimens is presented in Fig. 3. The wing length frequency shows a clear separation between Broadbilled Prion

TABLE 1

SUMMARY OF THE SURVEYS CONDUCTED ON SELECTED EASTERN CAPE BEACHES DURING THE PERIOD OF INCLEMENT WEATHER, AUGUST - SEPTEMBER 1981 (FIGURES IN BRACKETS REPRESENT NUMBER OF EACH SPECIES)

Date	Locality	Coordinates	Distance covered (km.)	Species recovered
18 Aug 1981	Maitland River	33 59S, 25 17E	8	<i>Pachyptila</i> sp. (1)
19 Aug 1981	Sardinia Bay	34 02S, 25 29E	6	<i>Pachyptila</i> sp. (14) <i>H. caerulea</i> (1) <i>Spheniscus demersus</i> (2) <i>Morus capensis</i> (1)
20 Aug 1981	Kini Bay	34 02S, 25 23E	2	<i>Pachyptila</i> sp. (11) <i>Daption capense</i> (2) <i>Puffinus griseus</i> (1) <i>Catharacta antarctica</i> (1) <i>S. demersus</i> (2) <i>M. capensis</i> (1)
20 Aug 1981	Maitland River		2	<i>Pachyptila</i> sp. (2) <i>C. antarctica</i> (2) <i>M. capensis</i> (1)
26 Aug 1981	Sardinia Bay		2	<i>Pachyptila</i> sp. (2) <i>Diomedea cauta</i> (1) <i>D. chlororhynchos</i> (1)
30 Aug 1981	Cape Recife	34 00S, 25 41E	3,5	<i>Pachyptila</i> sp. (15) <i>D. chlororhynchos</i> (1) <i>Daption capense</i> (2) <i>S. demersus</i> (4) <i>M. capensis</i> (1) <i>Procellaria aequinoctialis</i> (1) <i>Sterna hirundo</i> (1)
3 Sep 1981	Sardinia Bay		3	<i>Pachyptila</i> sp. (3)

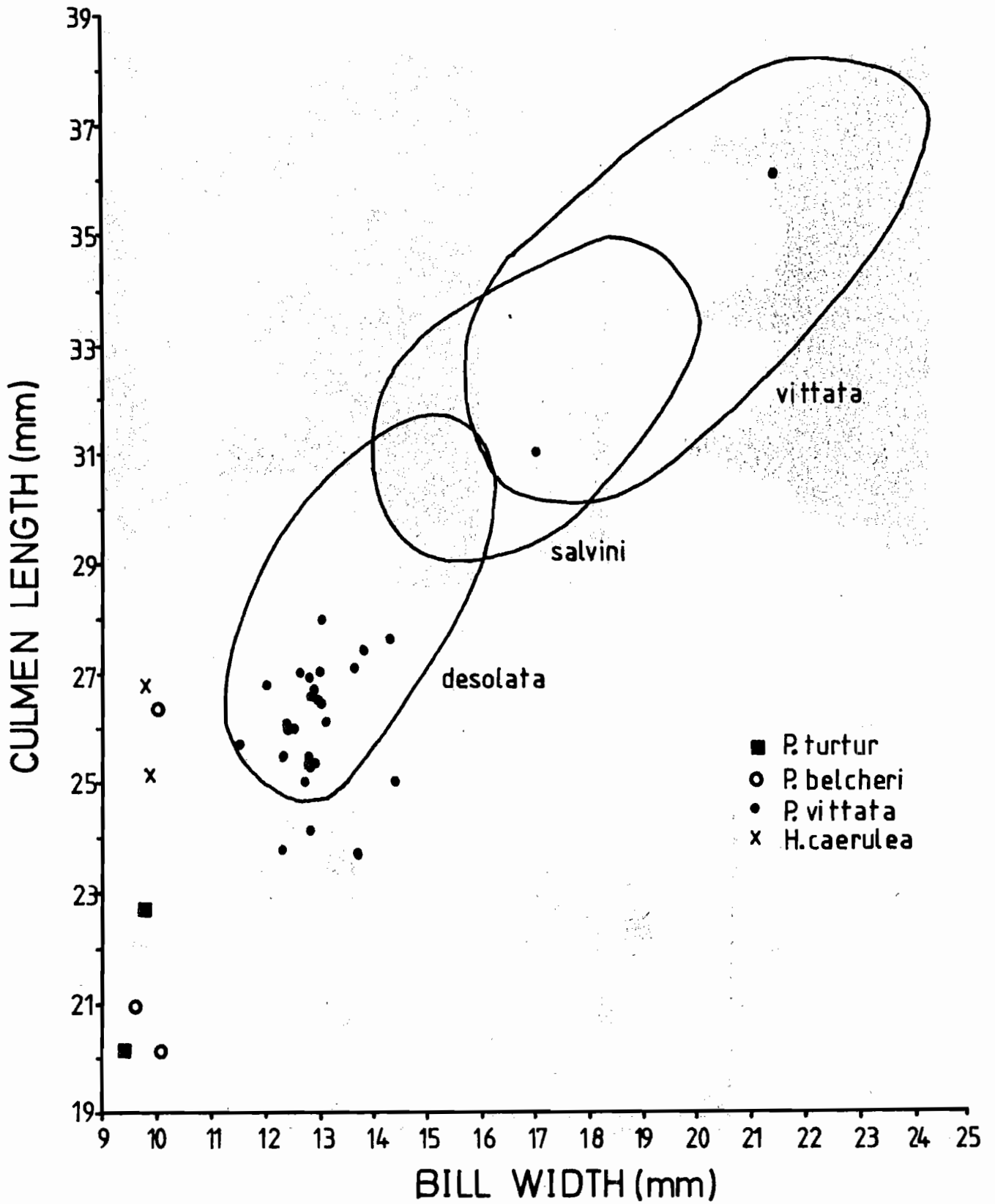


Figure 1

Plot of culmen length against beak width for the prions *Pachyptila* sp. and the Blue Petrel *Halobaena caerulea*. Circles represent known ranges from Cox (1980)

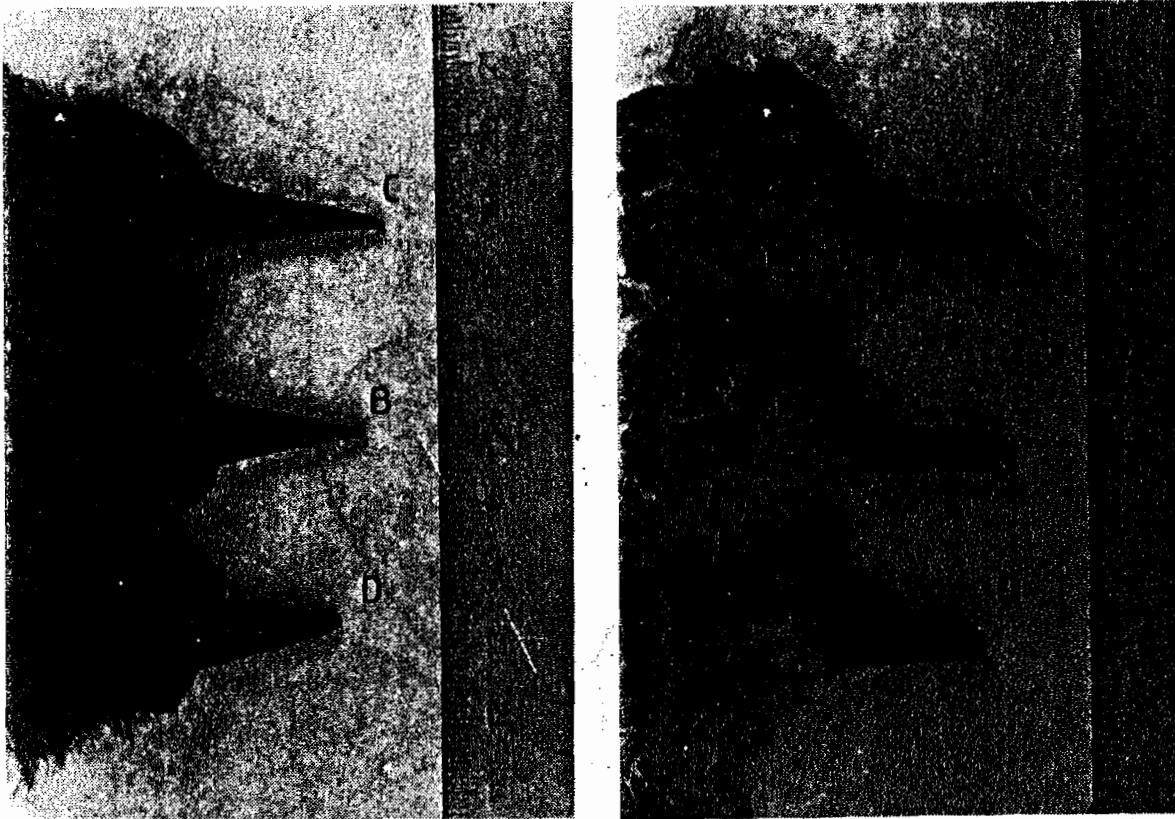


Figure 2

Bill morphology of the specimens identified as *P. belcheri* (B & C) and *P. turtur* (D)

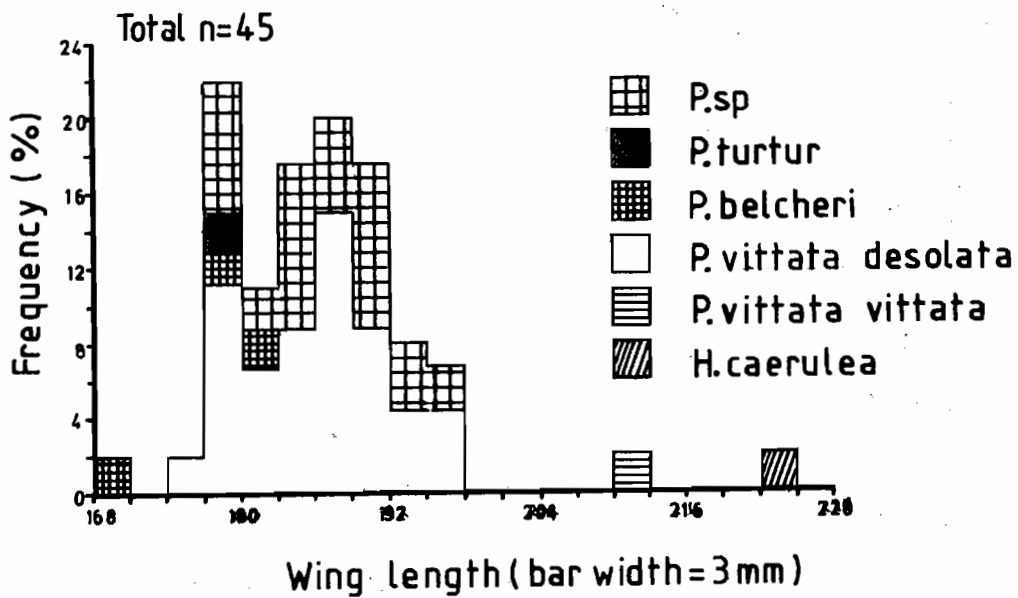


Figure 3

The length frequency distribution of measured wings from identified and part specimens for prions *Pachyptila* sp. and the Blue Petrel *Halobaena caerulea*

TABLE 2

MEASUREMENTS OF THE SELECTED CHARACTERS FOR PRIONS *PACHYPTILA* SPP.
AND BLUE PETRELS *HALOBAENA CAERULEA* RECOVERED ON
EASTERN CAPE BEACHES, AUGUST - SEPTEMBER 1981

Species	N	Culmen (mm)			Bill width (mm)		
		\bar{x}	s.d.*	Range	\bar{x}	s.d.	Range
<i>P. turtur</i>		20,1			9,4		
		22,7			9,8		
<i>P. belcheri</i>		20,1			10,1		
		20,9			9,6		
		26,3			10,0		
<i>P.v. desolata</i>	26	25,9 \pm 1,12		23,7-27,6	13,0 \pm 0,07		11,5-14,5
<i>P.v. salvini</i>		31,0			17,0		
<i>P.v. vittata</i>		36,0			21,4		
<i>H. caerulea</i>		25,1			9,9		
		26,8			9,8		

Species	N	Unguis length (mm)			Tarsus (mm)		
		\bar{x}	s.d.	Range	\bar{x}	s.d.	Range
<i>P. turtur</i>		10,1			31,8		
		12,5			32,0		
<i>P. belcheri</i>		11,1			32,8		
		11,6			31,4		
		12,4			32,8		
<i>P.v. desolata</i>		13,2 \pm 0,76		11,9-14,5	32,2 \pm 0,79		32,1-34,7
<i>P.v. salvini</i>		13,4			36,3		
<i>P.v. vittata</i>		16,1			38,4		
<i>H. caerulea</i>		16,2			37,0		
		14,6			32,8		

Table 2 (continued)

Species	N	Toe (mm)			Wing (mm)		
		\bar{x}	s.d.*	Range	\bar{x}	s.d.	Range
<i>P. turtur</i>		32,0 32,8			177		
<i>P. belcheri</i>		31,4 31,7 31,9			169 180 182		
<i>P.v. desolata</i>	26	31,4	$\pm 1,00$	29,1-33,0	186	$\pm 5,42$	179-197
<i>P.v. salvini</i>		33,4					
<i>P.v. vittata</i>		36,5			212		
<i>H. caerulea</i>		37,0 35,2			225 -		

Species	N	Mass (g)		
		\bar{x}	s.d.	Range
<i>P. turtur</i>				98
<i>P. belcheri</i>				
<i>P.v. desolata</i>	26		± 16	102
<i>P.v. salvini</i>				
<i>P.v. vittata</i>				157
<i>H. caerulea</i>				- -

*standard deviation

P. vittata and *H. caerulea*, and these two species from the remaining species, the latter showing a considerable degree of overlap. Mediumbilled Prion *P. v. salvini* was not represented in the bar graph since the wing length was not recorded. It is thus considered that owing to the observed range in wing length of Dove Prion *P. v. desolata*, similar ranges of both *P. v. salvini* and *P. v. vittata* could be expected, and that wing length would be unsuitable for separating the individuals of different taxa.

DISCUSSION

The status of prions occurring in South African waters is uncertain, largely due to the difficulty experienced in their identification. Brooke and Sinclair (1979) listed six species as occurring in southern Africa, with *P. desolata* considered to be the commonest and *P. turtur* and Fulmar Prion *P. crassirostris* the least common. Preliminary results from beach walks tend to support these observations (Cooper 1977, Avery 1978, 1979).

Two reviews dealing with the taxonomy of prions, have since been published. Harper (1980) recognized six species and one subspecies each of *P. turtur* and *P. crassirostris*, while Cox (1980) accepted the existence of only three species *P. turtur*, *P. belcheri* and *P. vittata*. In view of the considerable variation in beak morphology exhibited by prions, I have followed Cox (1980) who recognized only three species.

It is evident from the results that all three species of prion were present in the recent wreck off the eastern Cape. Of the 35 specimens examined, 28 are considered to be *P. vittata desolata*, one *P. v. salvini*, one *P. v. vittata*, three *P. belcheri* and two *P. turtur*. The subspecific status of the *P. turtur* is uncertain due to the limited available material. However, they are both considered likely to be the nominate race in the light of measurements of specimens breeding on Marion Island and possibly on the Crozet Islands given by Cox (1980).

A comparison of the mean measurements of *P. v. desolata* with those given by Cox (1980) showed similarities with birds measured on Ile de L'est of the Crozet Islands which have a longer tarsus than birds measured on other islands, while bill dimensions were similar to those recorded from Kerguelen Island and Antarctica.

The measurements of the single *P. v. salvini* and *P. v. vittata* are similar to those recorded from birds on Marion and Gough Island respectively (Cox 1980). The above comparisons are based on very few specimens and hence the probable origin of the birds is somewhat speculative. However the data have been presented in such a manner that when more material becomes available they can be included in a more comprehensive review.

The two Blue Petrels have been included in this note since they show a superficial resemblance to prions. Southern African records of this species were recently reviewed (Every *et al.* 1981) and their appearance in August corresponds with months for which southern African records of this species exist.

ACKNOWLEDGEMENTS

Mrs J. Spearpoint and L. McGill kindly allowed me to use material they had collected on regular beach walks.

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