RECOVERY OUTLINE

Rockhopper Penguin (eastern)

1	Family	Spheniscidae
2	Scientific name	*Eudyptes chrysocome filholi* Hutton, 1879
3	Common name	Rockhopper Penguin (eastern)
4	Conservation status	Vulnerable: A1ac

5 Reasons for listing

Globally, the subspecies is Vulnerable, and as trends in the Australian population are unknown, decreases of 20-50% are predicted from changes in other monitored populations (Vulnerable: A1), as determined by direct observation (a) and changes in area of occupancy (c).

Australian breeding colonies	*Estimate*	*Reliability*
Extent of occurrence	*5,000,000 km²*	*medium*
trend	*stable*	*high*
Area of occupancy	*20 km²*	*medium*
trend	*decreasing*	*medium*
No. of breeding birds	*400,000*	*low*
trend	*decreasing*	*low*
No. of sub-populations	*4*	*high*
Largest sub-population	*400,000*	*medium*
Generation time	*10 years*	*medium*
Global population share	*25 %*	*medium*
Level of genetic exchange	*low*	*low*

6 Infraspecific taxa

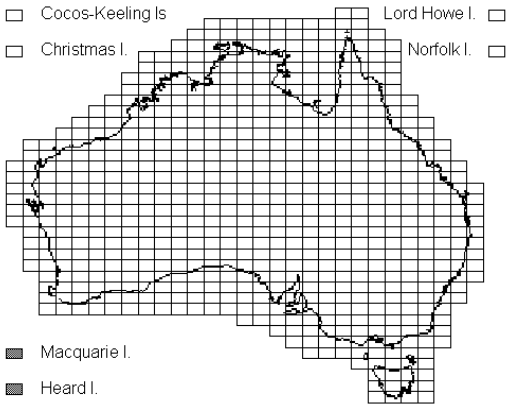
Both other subspecies are extralimital: *E. c. chrysocome* (Falkland Is and off Cape Horn) and *E. c. moseleyi* (Atlantic Ocean Tristan da Cunha, Gough, Amsterdam and St Paul Is). Global status of the species is Vulnerable.

7 Past range and abundance

In Australian territory, breeding on Macquarie, Heard and nearby islands. Extralimital populations on Marion, Crozet, Kerguelen, Campbell, Auckland and Antipodes Is. In winter and spring, when not breeding, presumed to move widely across Southern Ocean, being regularly encountered off Tasmania (Marchant and Higgins, 1990, E. Woehler).

8 Present range and abundance

As above. Most recent population estimates: Macquarie I., 23 colonies and 200,000-600,000 birds, Bishop and Clerk Is, 2 colonies and 40 birds, Heard I., 12 colonies and 20,000 birds, and McDonald I. 4 colonies and at least 20 birds (Woehler, 1991, 1993, Ellis *et al.*, 1998). Extralimital decreases recorded on Campbell I. (94%), Antipodes I. and Auckland Is (Campbell and Moors, 1994, Ellis *et al.*, 1998) and of other subspecies on Falkland Is. (90%; Ellis *et al.*, 1998). Difficulties with surveying could be masking any decreases on Australian islands (C. Hull).



9 Ecology

Rockhopper Penguins nest in colonies among rocks and tussock grass on subantarctic islands, and forage in surrounding waters, primarily taking euphausiids and fish (Hindell, 1988, Hull, 1997, 1999a). Foraging by Rockhopper Penguins may be less efficient and closer to shore than that of co-occurring Royal Penguins *E. schlegeli*, making them more susceptible to shifts in prey availability (Hull, 1999a,b).

10 Threats

Although cats and rats take eggs and young on Macquarie I., it is not known if this is at significant levels. The other potential terrestrial threat is diseases brought by visitors (C. Hull). The population decline on Campbell I. is associated with a rise in sea surface temperature causing movement of food away from shore (Cunningham and Moors, 1994). Other marine threats include fishing, which may alter the abundance of food, and pollution, including plastic debris, which is ingested (Ellis *et al.*, 1998, C. Hull).

11 Information required

11.1 Determine trends in numbers on Macquarie and Heard Is.

11.2 Establish demographic parameters, particularly survival of different age classes.

11.3 Monitor rates and effects of marine debris ingestion.

11.4 Determine extent of overlap between fishing grounds and foraging areas.

11.5 Identify genetic relationship with other Rockhopper Penguin populations.

12 Recovery objectives

12.1 A stable or increasing population over a period of decades.

13 Actions completed or under way

13.1 Studies of foraging ecology have been completed on Macquarie I. and are planned for Heard I.

13.2 Research has been initiated comparing ecology of the Macquarie sub-population with the decreasing sub-population on Campbell I.

13.3 Continued monitoring of breeding population size and success.

13.4 Ongoing feral animal control on Macquarie I.

13.5 Tourists on breeding islands are managed to prevent disturbance.

14 Management actions required

14.1 Limit further construction on breeding islands.

15 Organisations responsible for conservation

Australian Antarctic Division, Environment Australia Tasmanian Parks and Wildlife Service.

16 Other organisations involved

Antarctic Science Advisory Committee, University of Tasmania.

17 Staff and financial resources required for recovery to be carried out

Staff resources required 2001-2005	*2.0*	*Project Officer (diet, foraging range)* [1]
	1.0	*Technical Officer (monitoring)* [2]
	1.0	*Technical Officer (ferals)* [2]

Financial resources required 2001-2005

Action	*Conservation agencies*	*Other funding sources*	*Total*
Demographic and foraging studies [1]	$64,000	$28,300	$92,300
Monitoring breeding sub-populations [2]	$21,900	$0	$21,900
Feral animal control on Macquarie I. [2]	$277,900	$0	$277,900
Research on plastics, parasites, disease and genetics [3]	$7,000	$7,000	$14,000
Total	$370,800	$35,300	**$406,100**

1 Costs for diet and foraging range studies on Macquarie I divided among Rockhopper Penguin, four breeding albatrosses and two giant-petrels; Heard I. divided among Rockhopper Penguin, three albatrosses and Southern Giant-Petrel

2 Costs of Macquarie I. monitoring and feral animal control shared among 19 threatened taxa; Heard I. monitoring divided among 17 taxa

3 Costs of research shared among 2 penguins, 2 giant-petrels, Wandering, Black-browed, Grey-headed, Shy and Light-mantled Albatrosses

18 Bibliography

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Comments received from

Barry Baker, Cindy Hull, Onno Huyser.