





## The man!

Point Biol (1992) 11:525-531

Received 25 June 1991: accepted 6 August 1991

Increases in Antarctic penguin populations: reduced competition

with whales or a loss of sea ice due to environmental warming?

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Polar Biology

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Key point: If the decimation of baleen whale populations did in fact lead to a "krill surplus", why were krilldependent, top predator populations exhibiting such dichotomous trends?

## "...the day **bird people** have

something to tell us about climate warming is perhaps the day logic in climate science is abandoned .... "

Anonymous Reviewer, Nature

"...a paper that creates this kind of controversy should be positive for science and the journal..."

G. Hempel, Editor, Pol. Biol.





































































































































## Classification summary

Count	%
11484	51
7360	32
555	2.4
486	2.1
2850	12.5
22735	
	Count 11484 7360 555 486 2850 22735

Classified as	Larger cates
Cryptophyte A	Flagellate all
Cryptophyte F	Flagellate all
Cryptophyte H	Flagellate all
Diatom	Diatom all
Diatom (charismatic)	Diatom all
Diatom (fuzzy)	Diatom all
Diatom (potential)	Diatom all
Dot flagellate	Flagellate all
Dot flagellate 2	Flagellate all
Flagellate straight	Flagellate all
Fuzzy	Discard
Gymnodinium 1	Flagellate all
Gymnodinium 2	Flagellate all
Gyrodinium	Flagellate all
Junk	Discard
LRT	Other
Nanoflagellate	Flagellate all
Pigment	Discard
Prasinophyte	Flagellate all
Telonema spp.	Other
Torodinium spp	Flagellate all
Unknown	Other
Air bubble	Discard
Bead	Discard
Ciliate	Discard
Corethron spp.	Diatom all
Dinoflagellate	Flagellate all
Gonyaulacaceae	Flagellate all
Phaeocystis spp. (cells)	Other
Phaeocystis spp. (colony)	Other
Spines	Discard
Tintinnid	Discard

uo		Flagellate	Diatom	Dinoflagellate	Other	Discard	% agree
cati	Flagellate	3939	940	115	931	538	61
sific	Diatom	665	6803	31	409	760	78
clas	Dinoflagellate	202	67	119	180	34	20
an o	Other	487	323	73	1444	233	56
m	Discard	363	1392	26	426	10848	83
Í	% agree	70	71	32	42	87	74

Automatic classification

Automatic classification matches 74% of human classification

All particles were classified/corrected by hand

Human classification has an error/uncertainty rate of 5-10%

