

Bird research: past, present and future

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In the beginning...

Behavioural
and
autecological
studies

(van Zinderen Bakker)

Role of birds in ecosystems



Ecosystem engineers

The role of seabirds in island ecosystems

<u>Marion Island</u>	<u>tons/year (dry mass)</u>
Guano	4 500
Nitrogen	640
Phosphorus	106
Feathers	430
Carcasses and eggs	170
	<u>5 100</u>

Disturbance, erosion, burrowing, trampling



U.C.T.
INSTITUTE

NO

NO SMOKING PLEASE
For the sake of your health and ours

The National Cancer Association of South Africa P.O. Box 2000 Johannesburg 2000

Population estimates, diet, digestive efficiency, pollutants

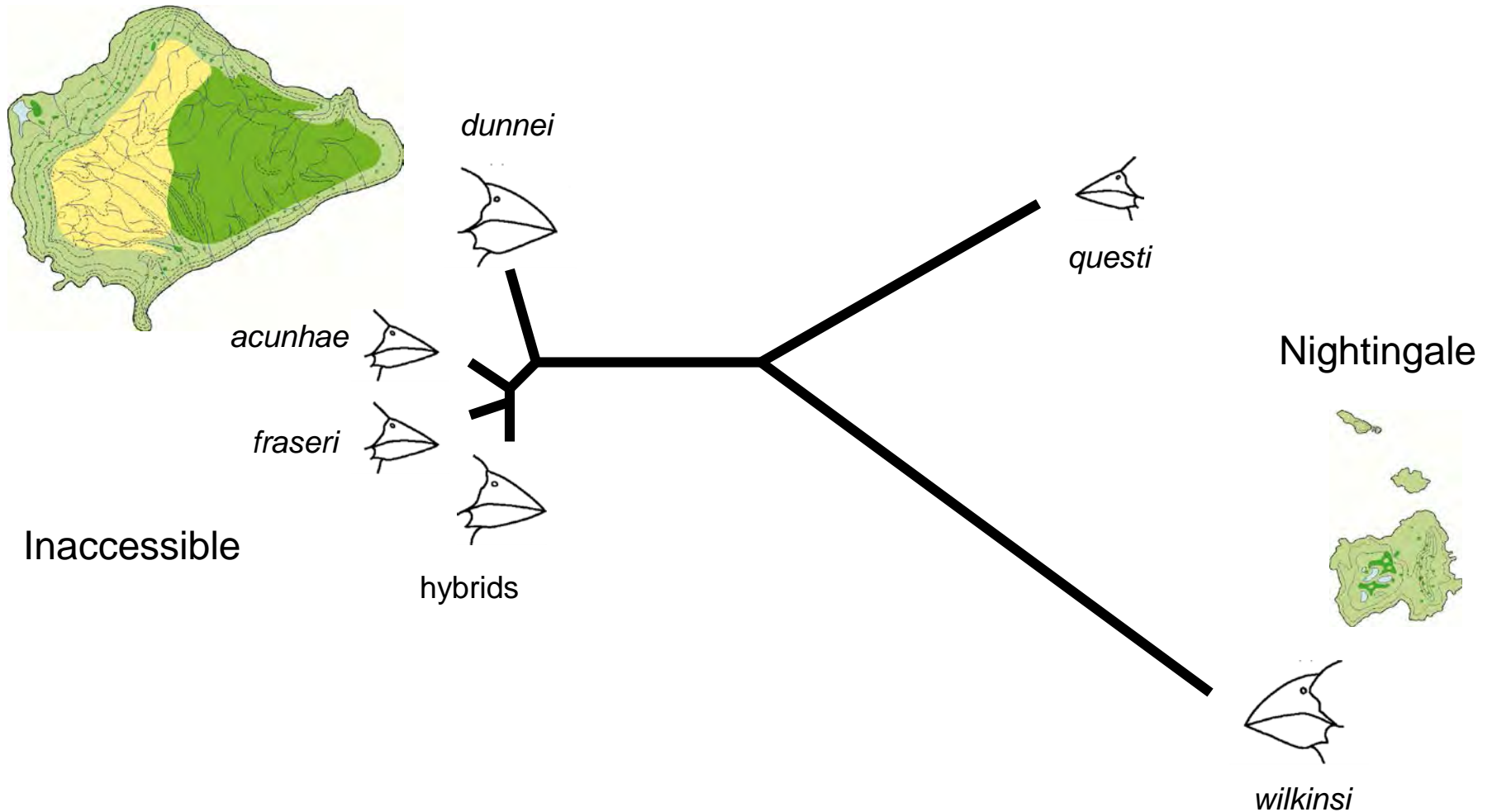






Ecological Speciation in South Atlantic Island Finches

Peter G. Ryan,^{1*} Paulette Bloomer,^{1,2} Coleen L. Moloney,¹ Tyron J. Grant,² Wayne Delport^{1,2}



Long-term colonies



Long-term colonies

Wandering Albatross: 1982 (2), 1985 (1)

Northern Giant Petrel: 1982

Yellow-nosed Albatross: 1982

Grey-headed Albatross: 1997

Tristan Albatross: 2007 (chicks banded since 1982)

Sooty Albatross: 2012 (Marion and Gough)



Recent population estimates and trends in numbers of albatrosses and giant petrels breeding at the sub-Antarctic Prince Edward Islands

PG Ryan^{1*}, MGW Jones¹, BM Dyer², L Upfold² and RJM Crawford^{2,3}

DEMOGRAPHY AND POPULATION TRENDS OF THE ATLANTIC YELLOW-NOSED ALBATROSS

RICHARD CUTHBERT^{1,4}, PETER G. RYAN², JOHN COOPER³ AND GEOFF HILTON¹

Modelling impacts of long-line fishing: what are the effects of pair-bond disruption and sex-biased mortality on albatross fecundity?

Michael S. L. Mills and Peter G. Ryan[†]

MULTISTATE MODELS FOR ESTIMATION OF SURVIVAL AND REPRODUCTION IN THE GREY-HEADED ALBATROSS (*THALASSARCHE CHRYSOSTOMA*)

SARAH J. CONVERSE,^{1,2,5} WILLIAM L. KENDALL,¹ PAUL F. DOHERTY, JR.,³ AND PETER G. RYAN⁴

Past breeding success predicts current success



I'm so bored...

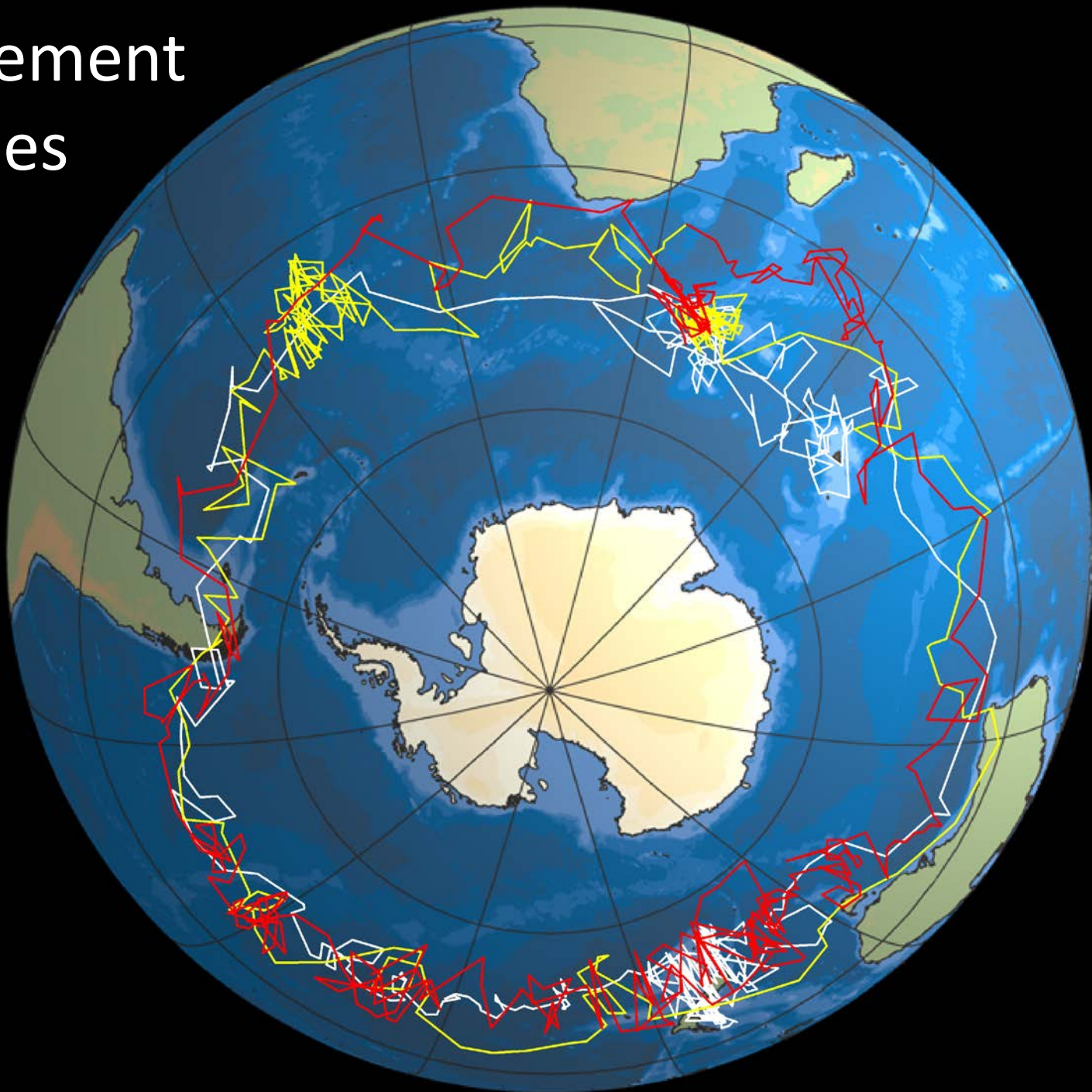
8-20% of males are cuckolded;
largely driven by female choice

Moult strategies in relation to breeding history





Movement studies



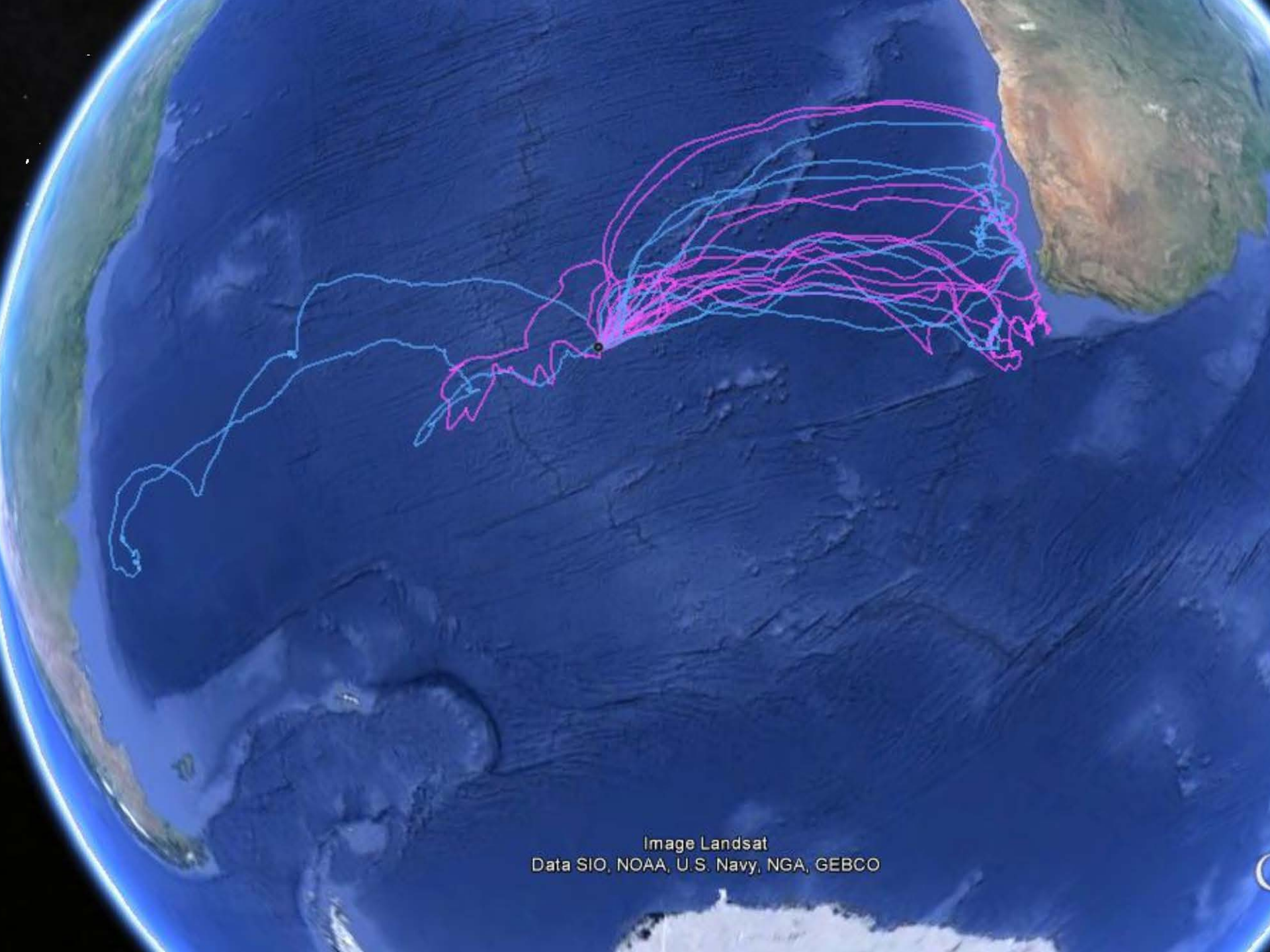
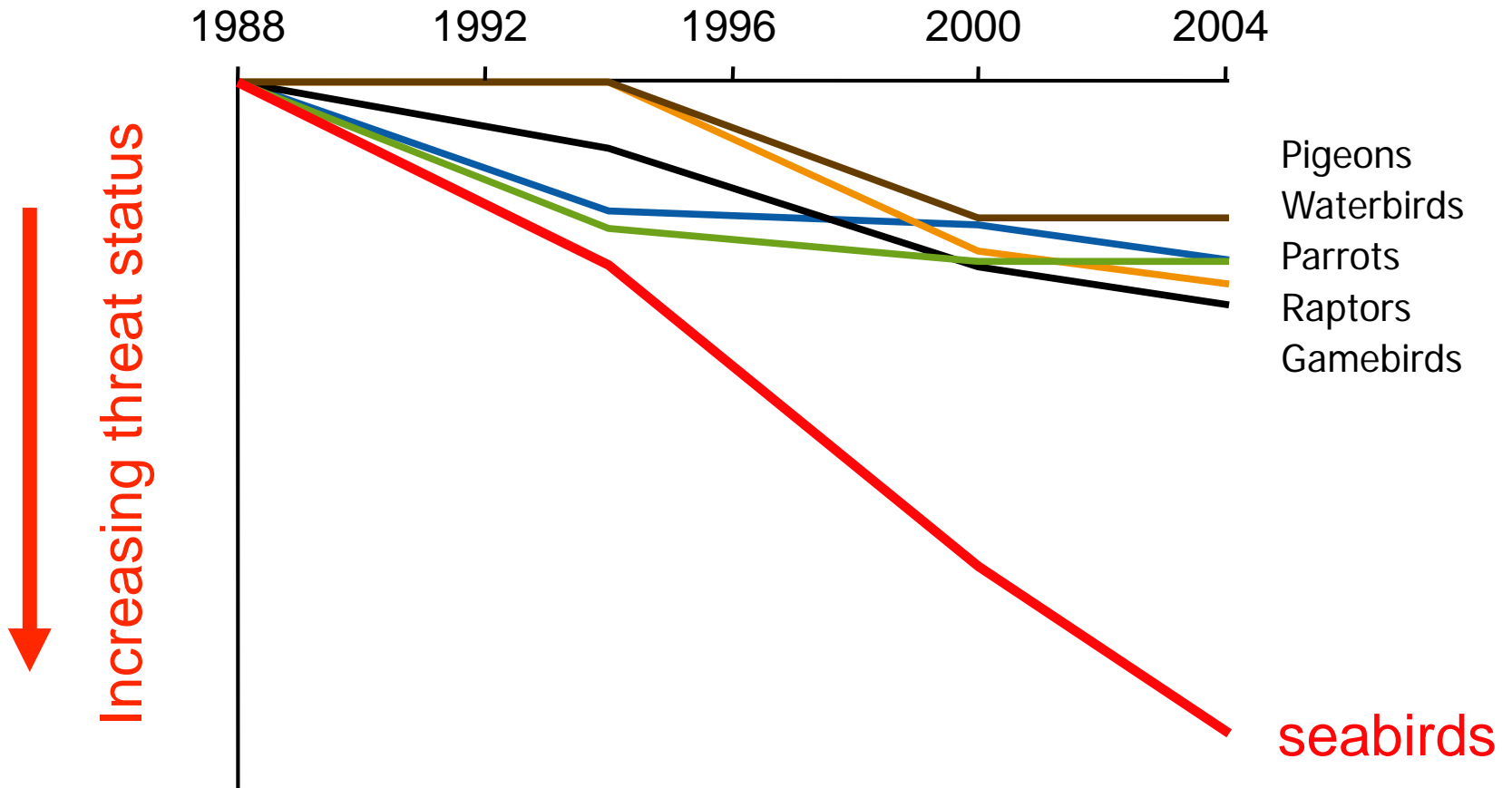


Image Landsat
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

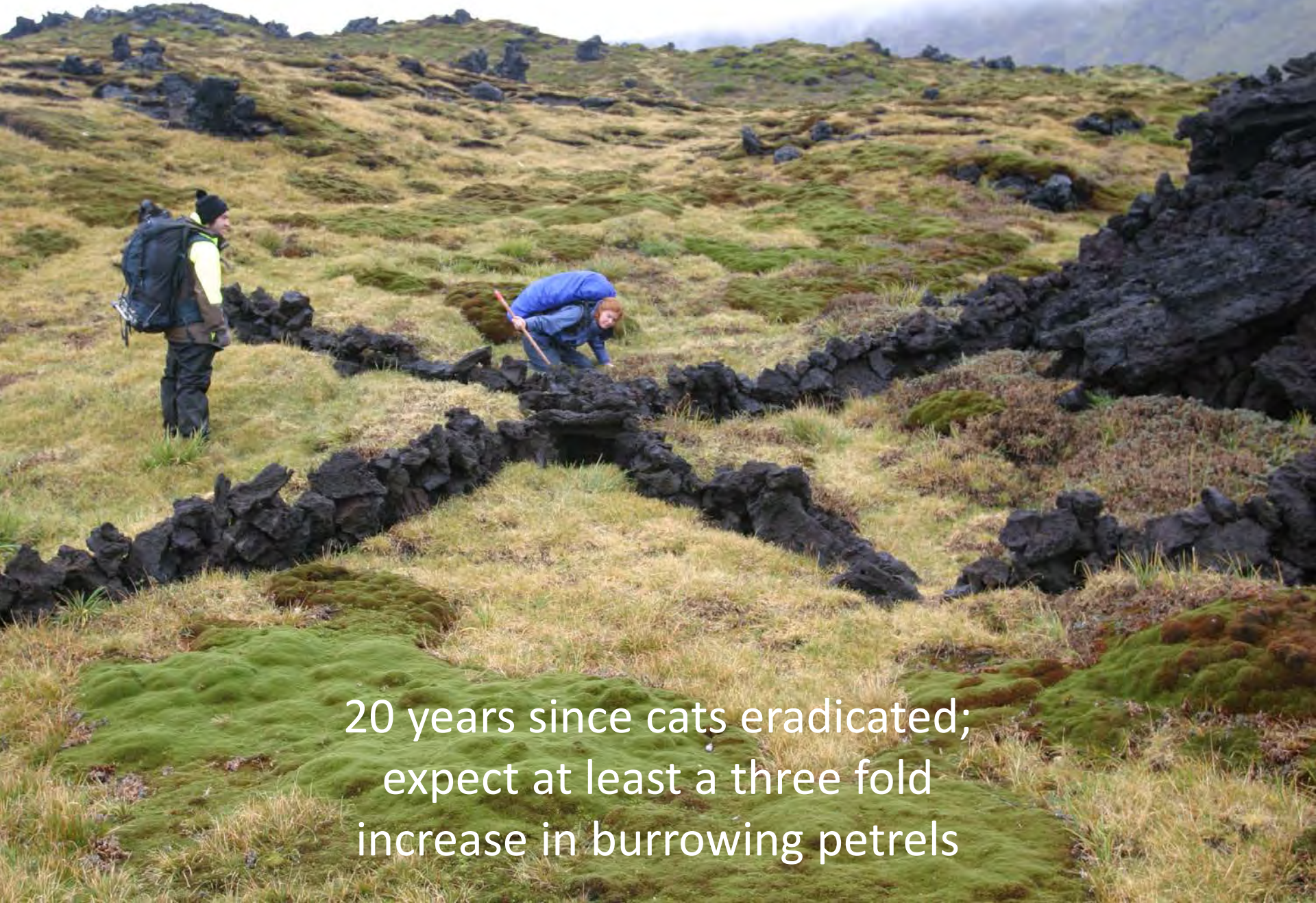
Changes in average threat status







1970s: 2000 cats killed 450,000 petrels per year

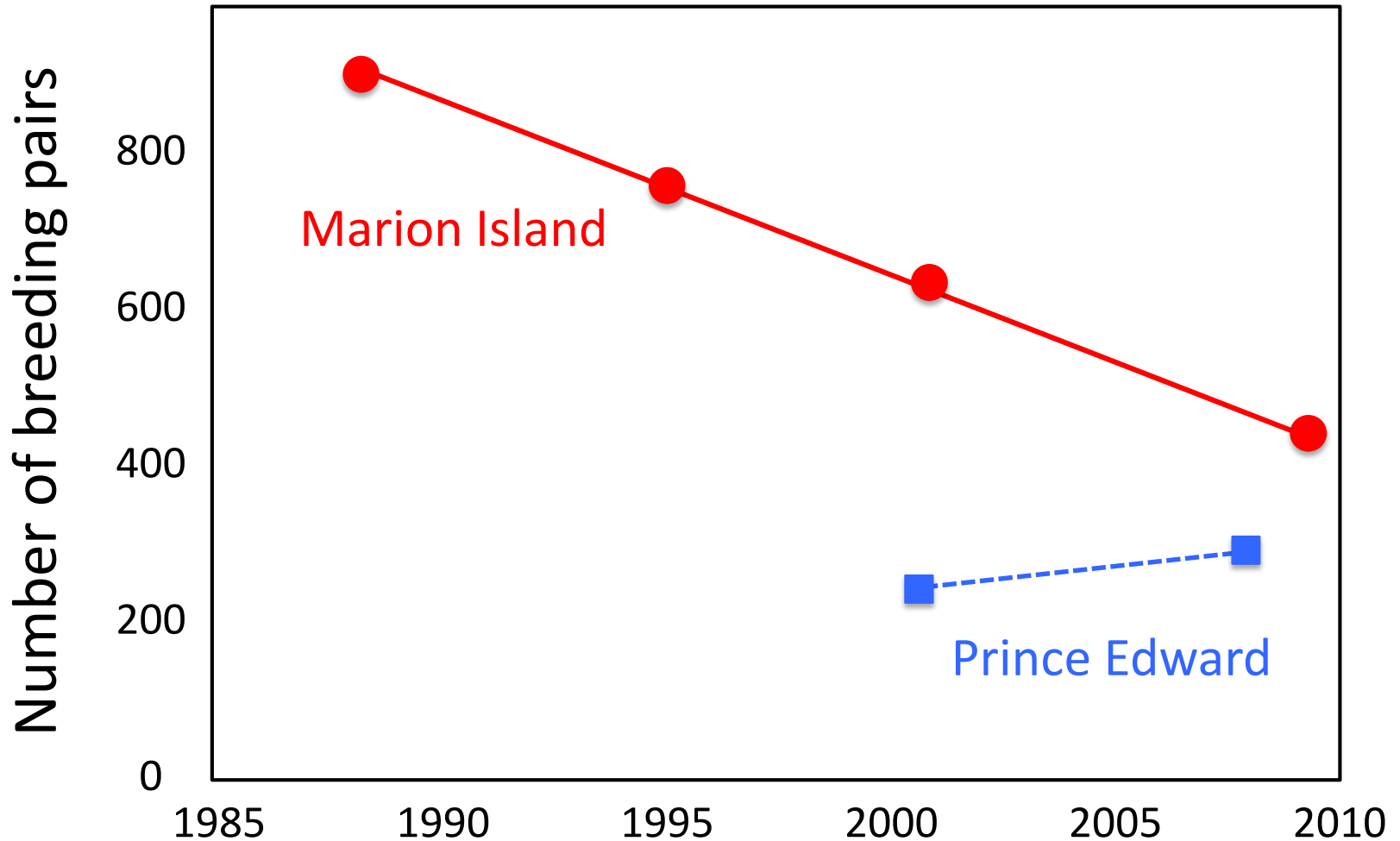


20 years since cats eradicated;
expect at least a three fold
increase in burrowing petrels

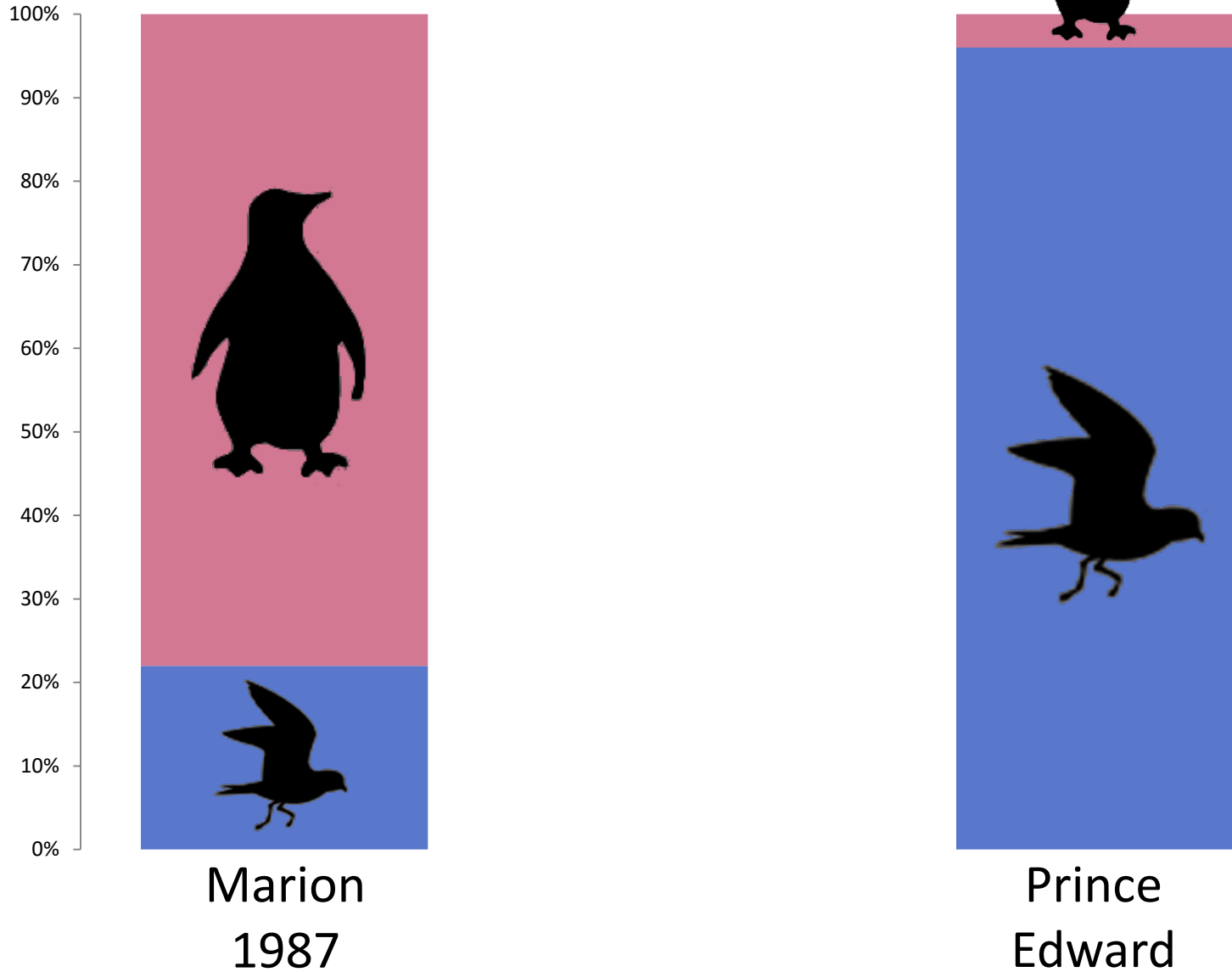
Skuas as indicators



Skua trends at the Prince Edward Islands



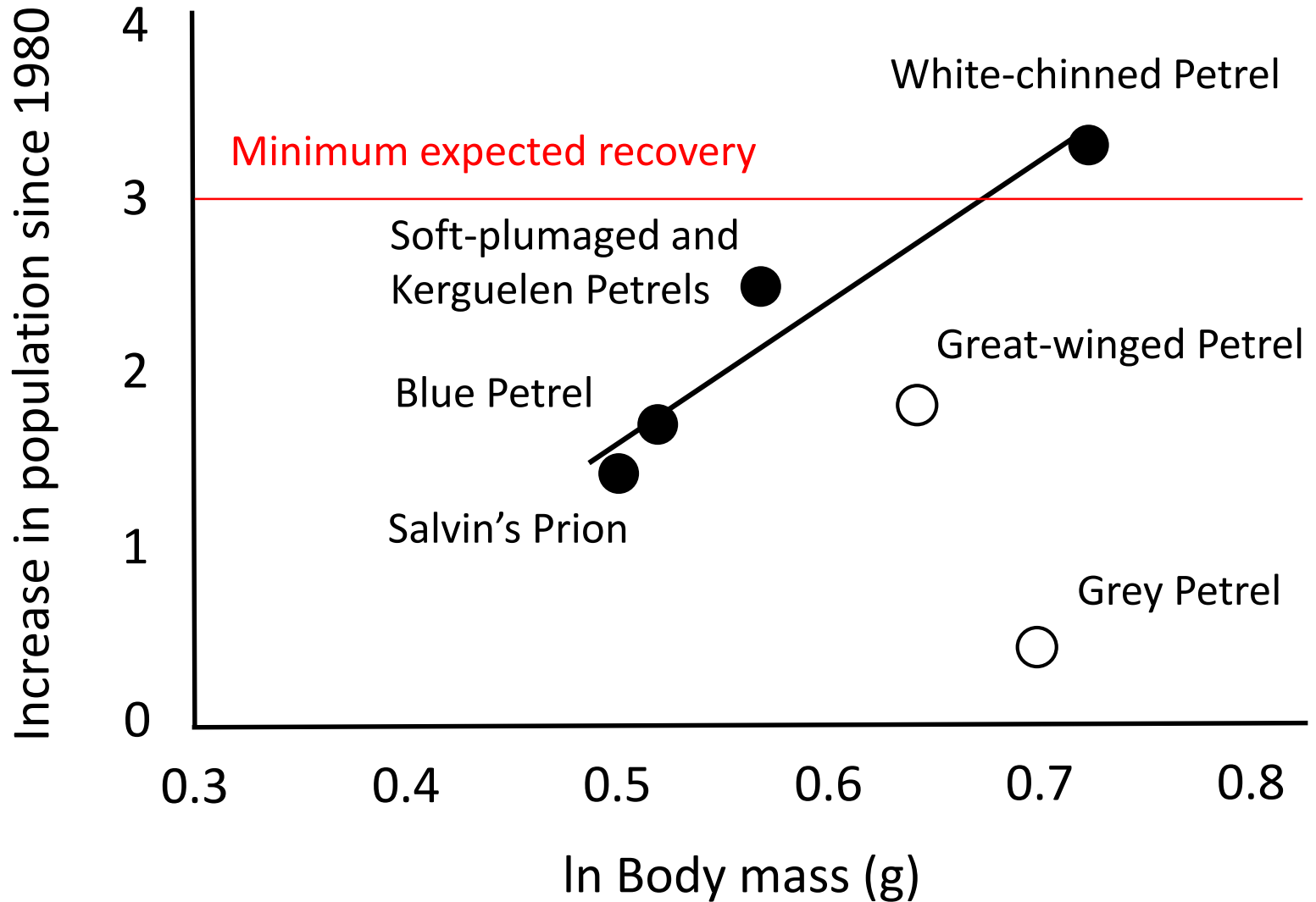
Skua diet



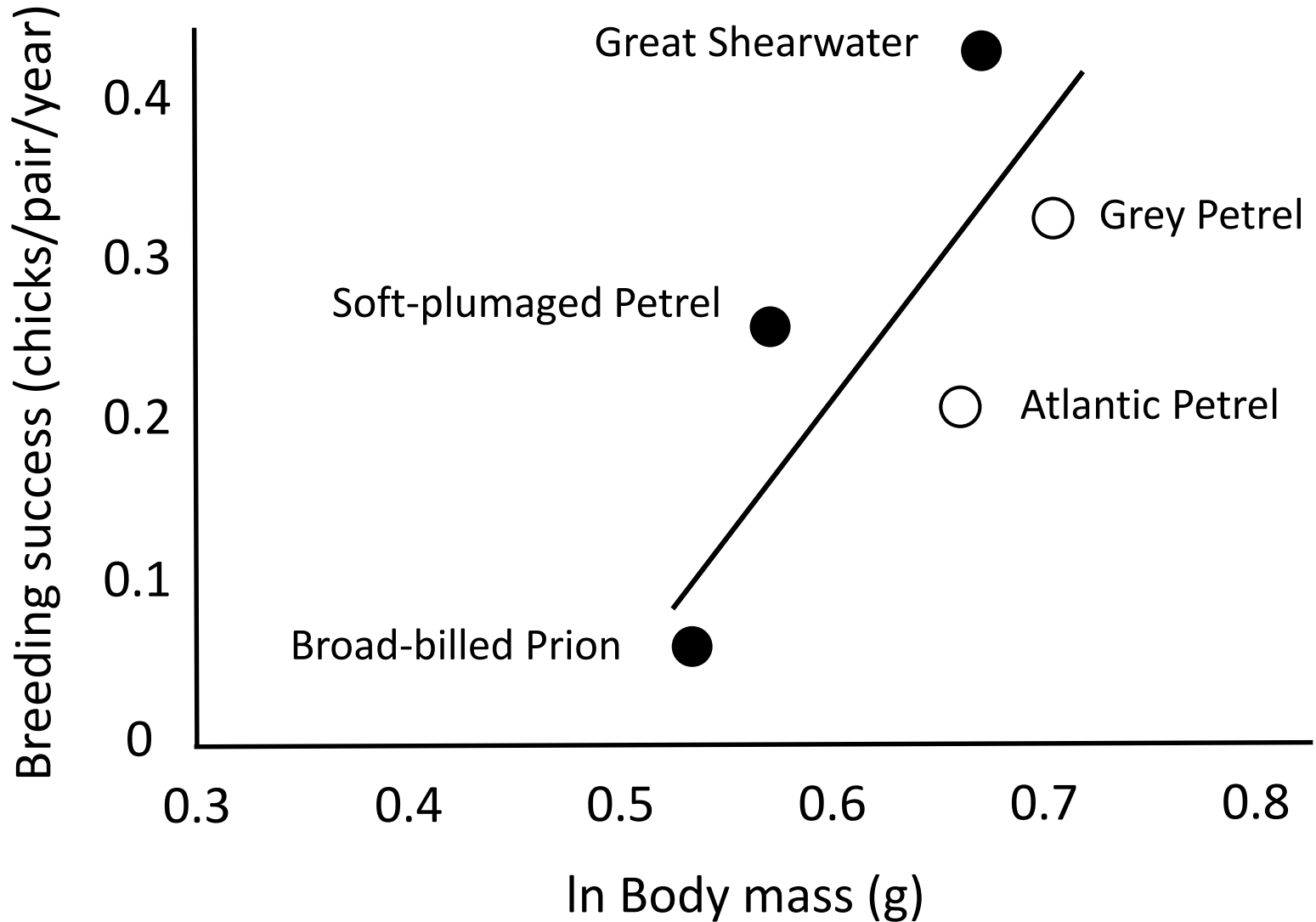


Mike Schramm in action 30 years on...

Marion long-term trend



Gough breeding success



Mice as mega-predators





Black-bellied Storm Petrel



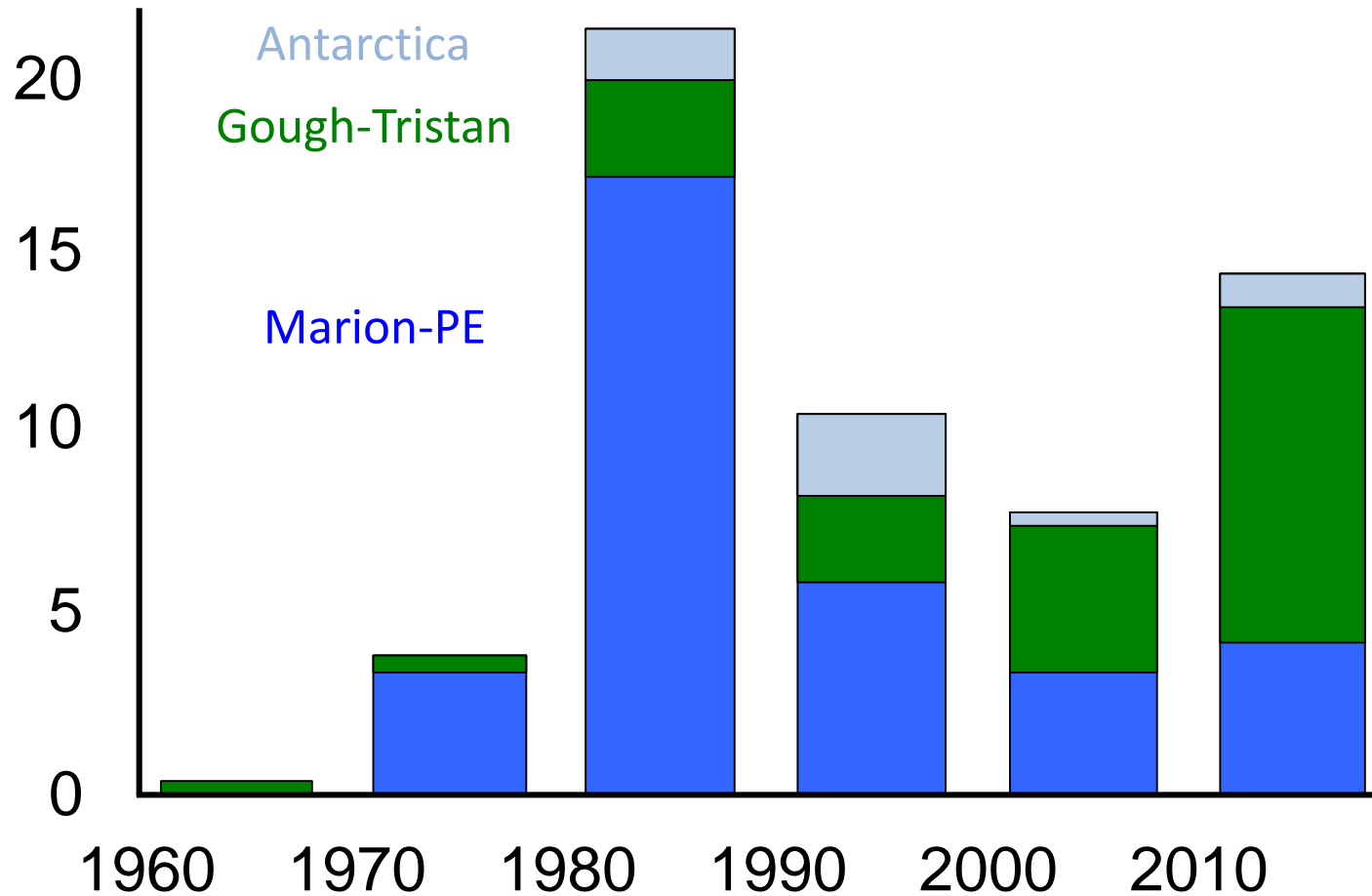
White-bellied Storm Petrel



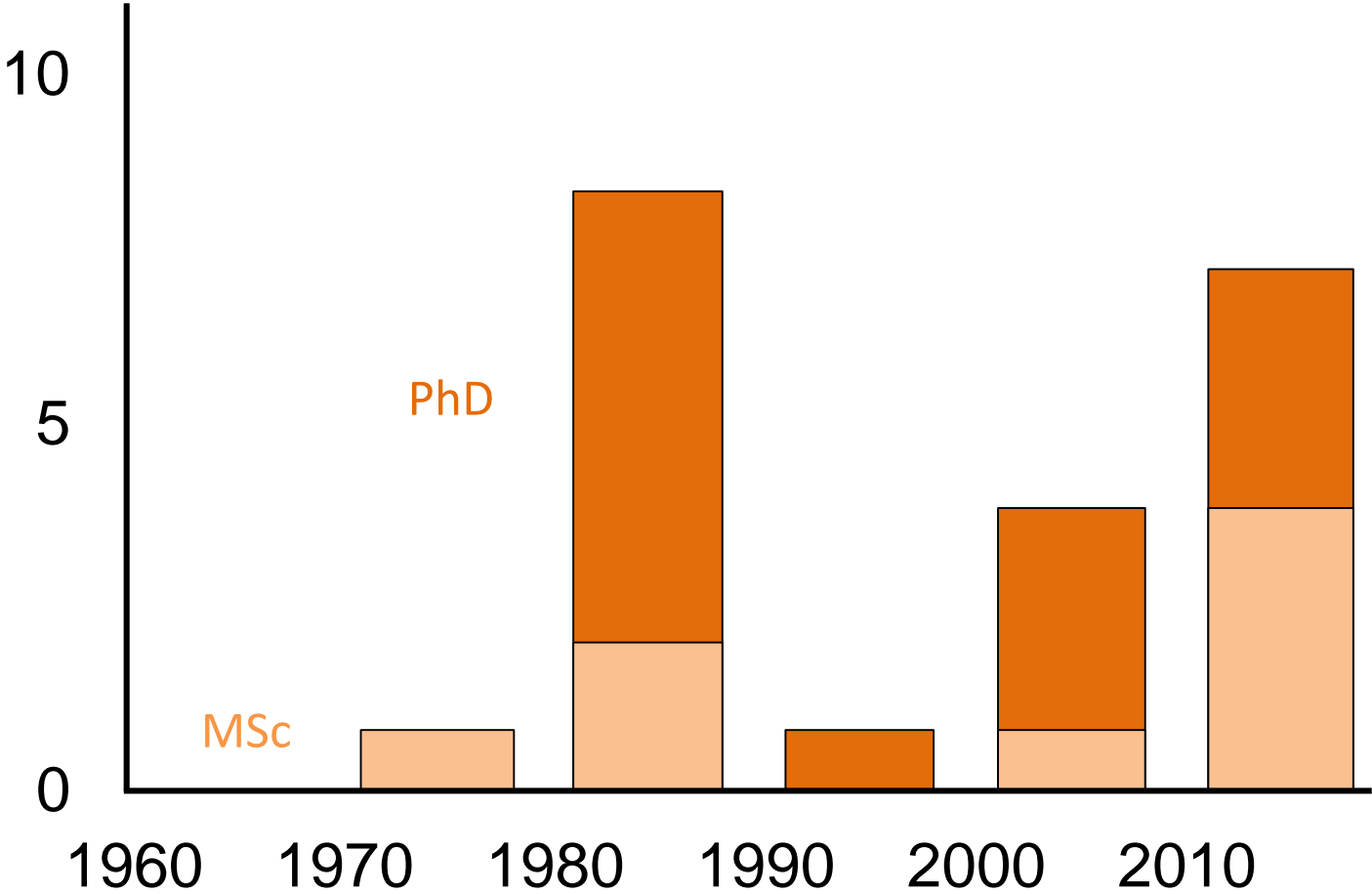
STARLITE
AVIATION GROUP

ZS-HRP

Scientific publications per year (~500)



Postgrad students graduating per decade



Restoration



Conservation

