

Key factors determining the costs of New Zealand threatened species programmes

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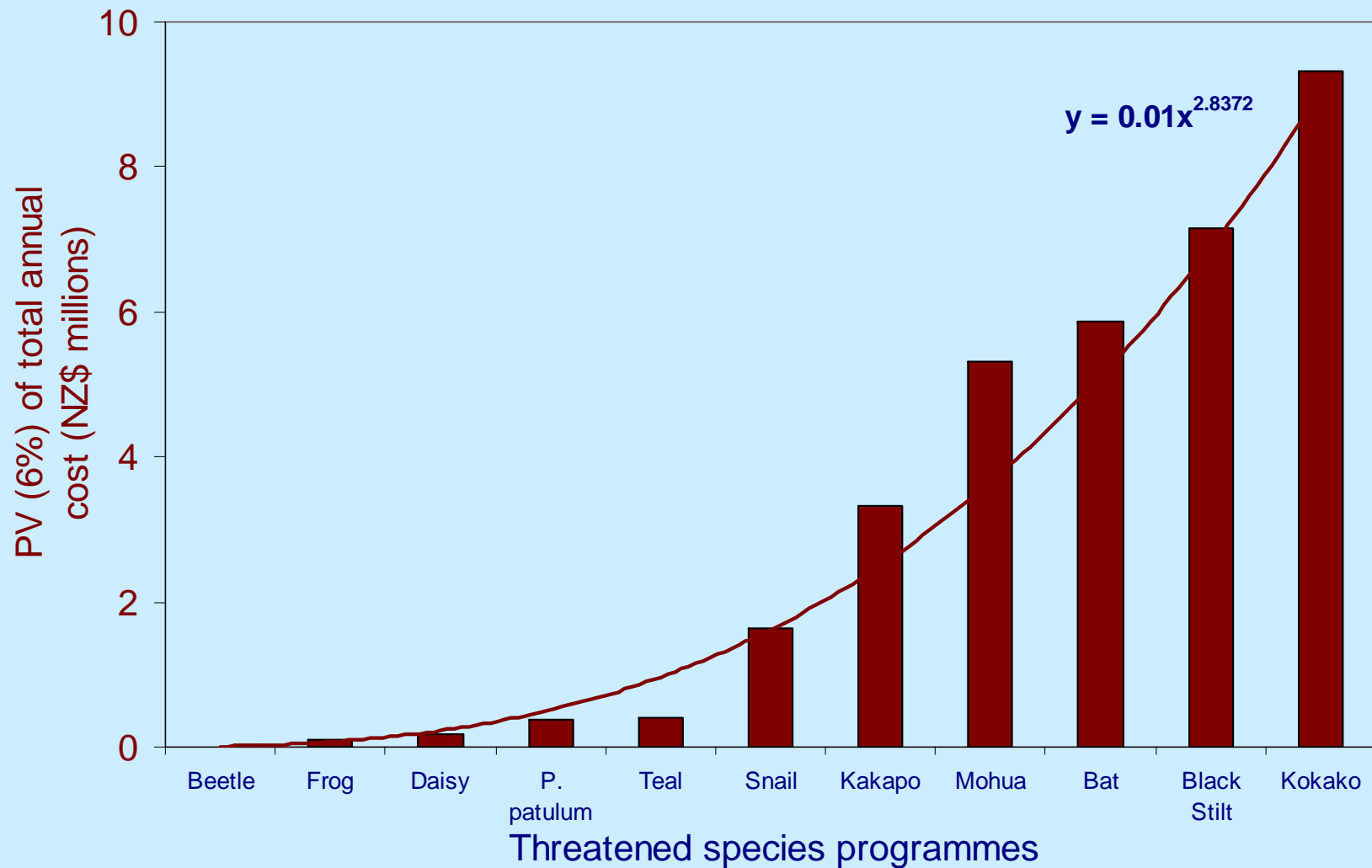
Introduction

- In 2002, 603 “Acutely Threatened” NZ species; total expenditure NZ\$35.8 million.
- NZBS - extra NZ\$26.5 million over 5 years, incl. NZ\$10 million for kiwi sanctuaries.
- Unclear why some threatened species programmes have high costs?
- Research aim was to use economic analysis to improve formal understanding of costs.

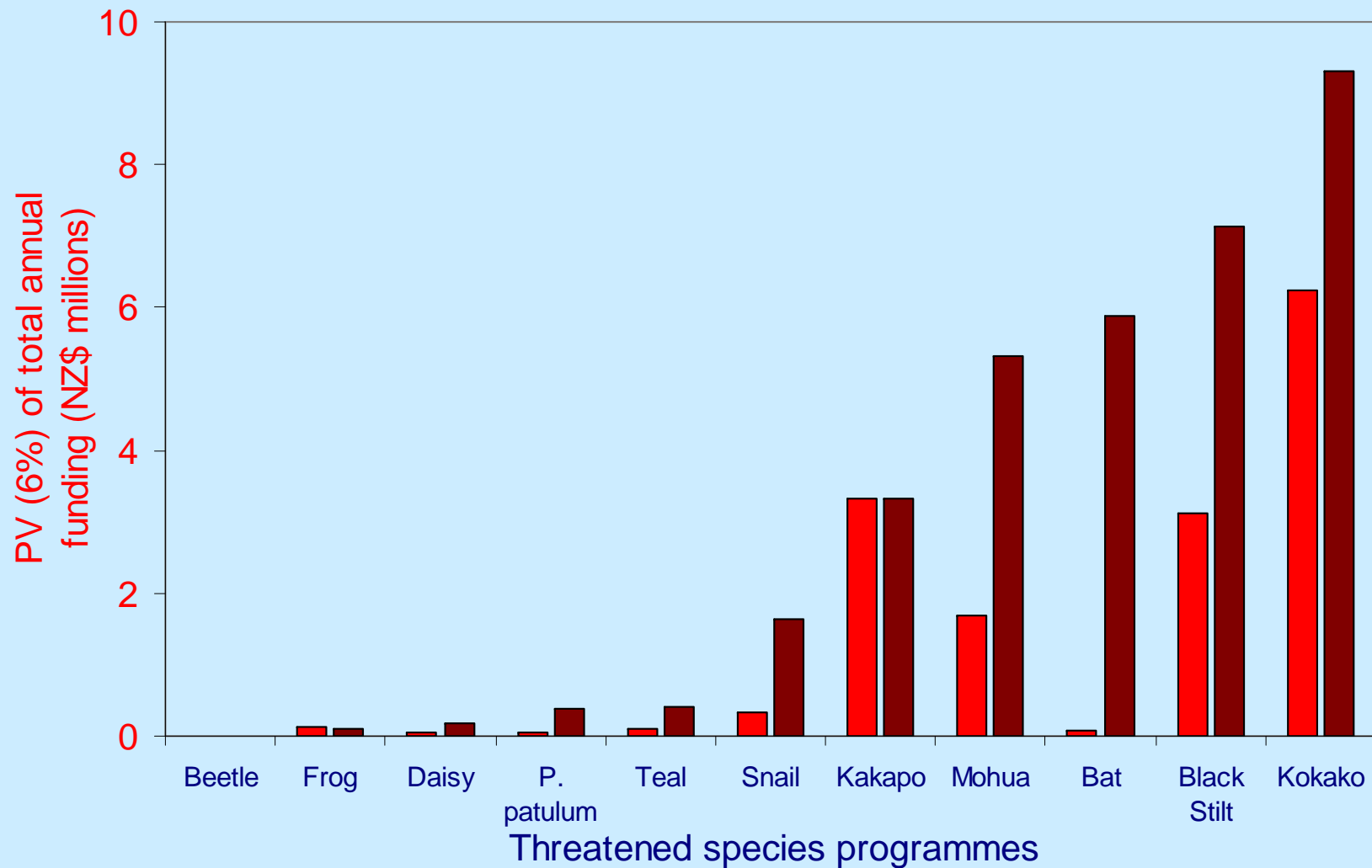
Blue skies research

- Cost function - Swanson's (1994) model of species extinction and biodiversity loss.
- Annual cost: costs of base natural resources + costs of managing threats.
- Total cost: stream of annual costs, extant population and recovery rate.
- Survey of NZDoC Recovery Group Leaders for 11 NZ threatened species programmes.

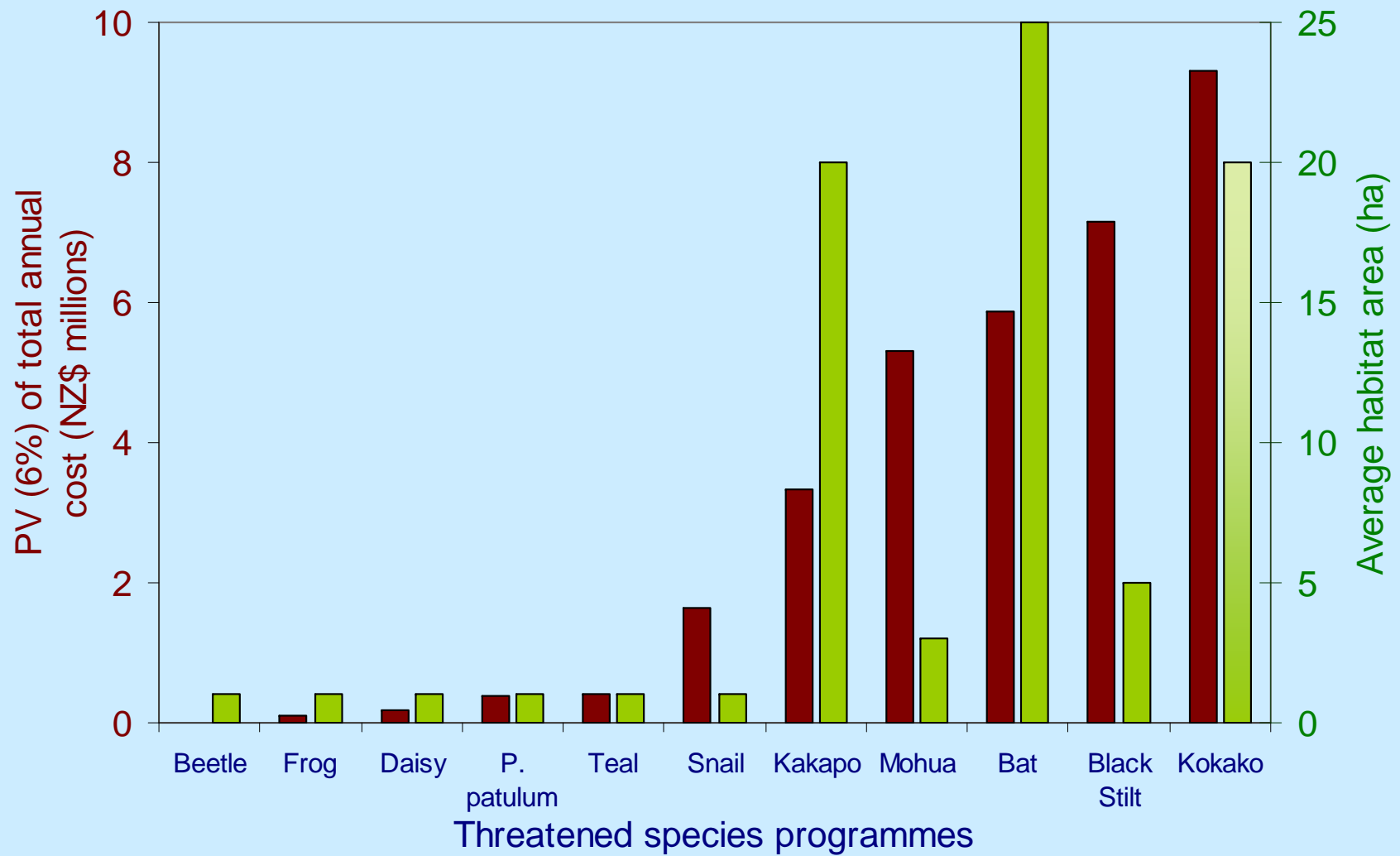
PV of annual costs 2003-2012



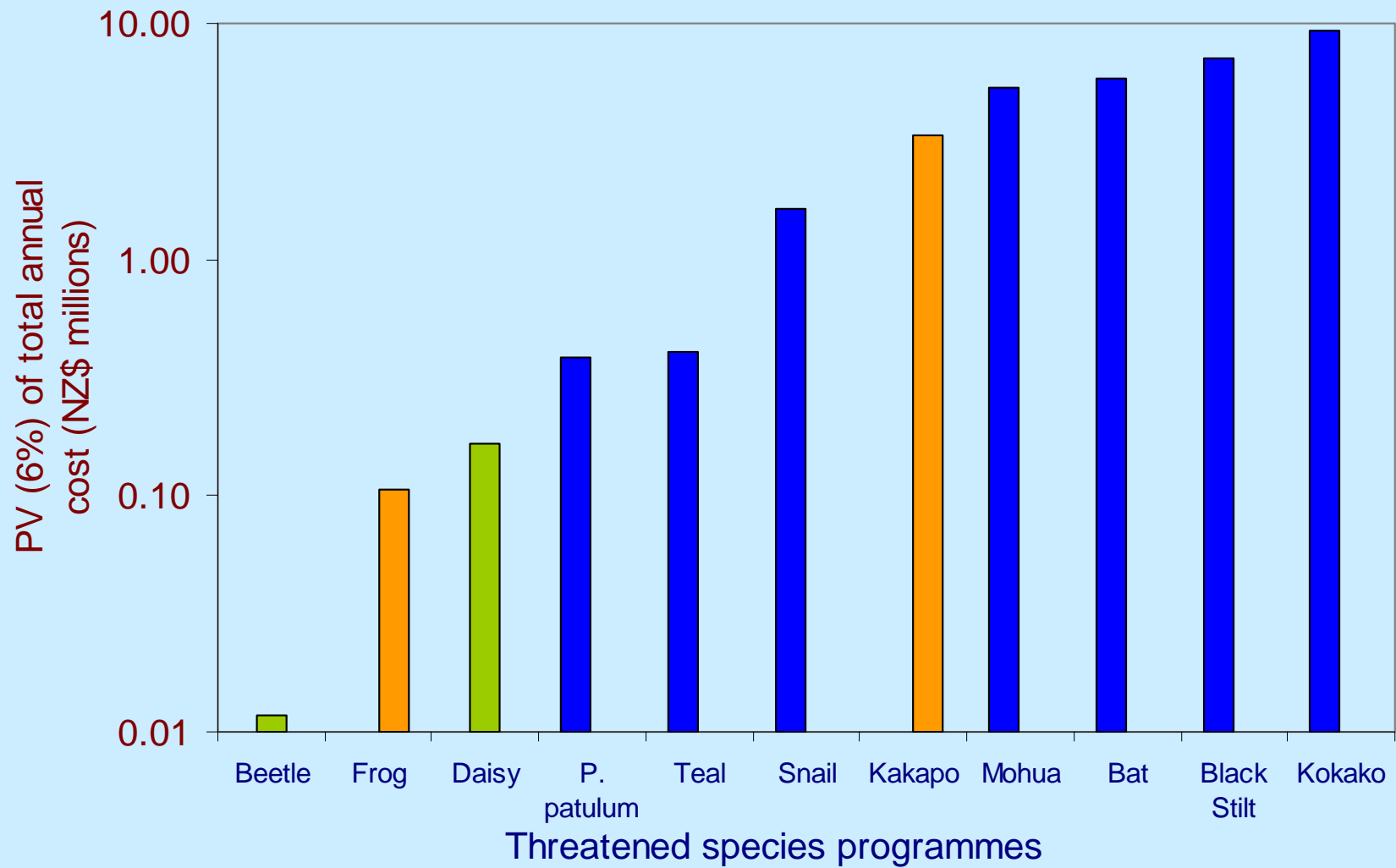
Cost versus funding 2003-2012



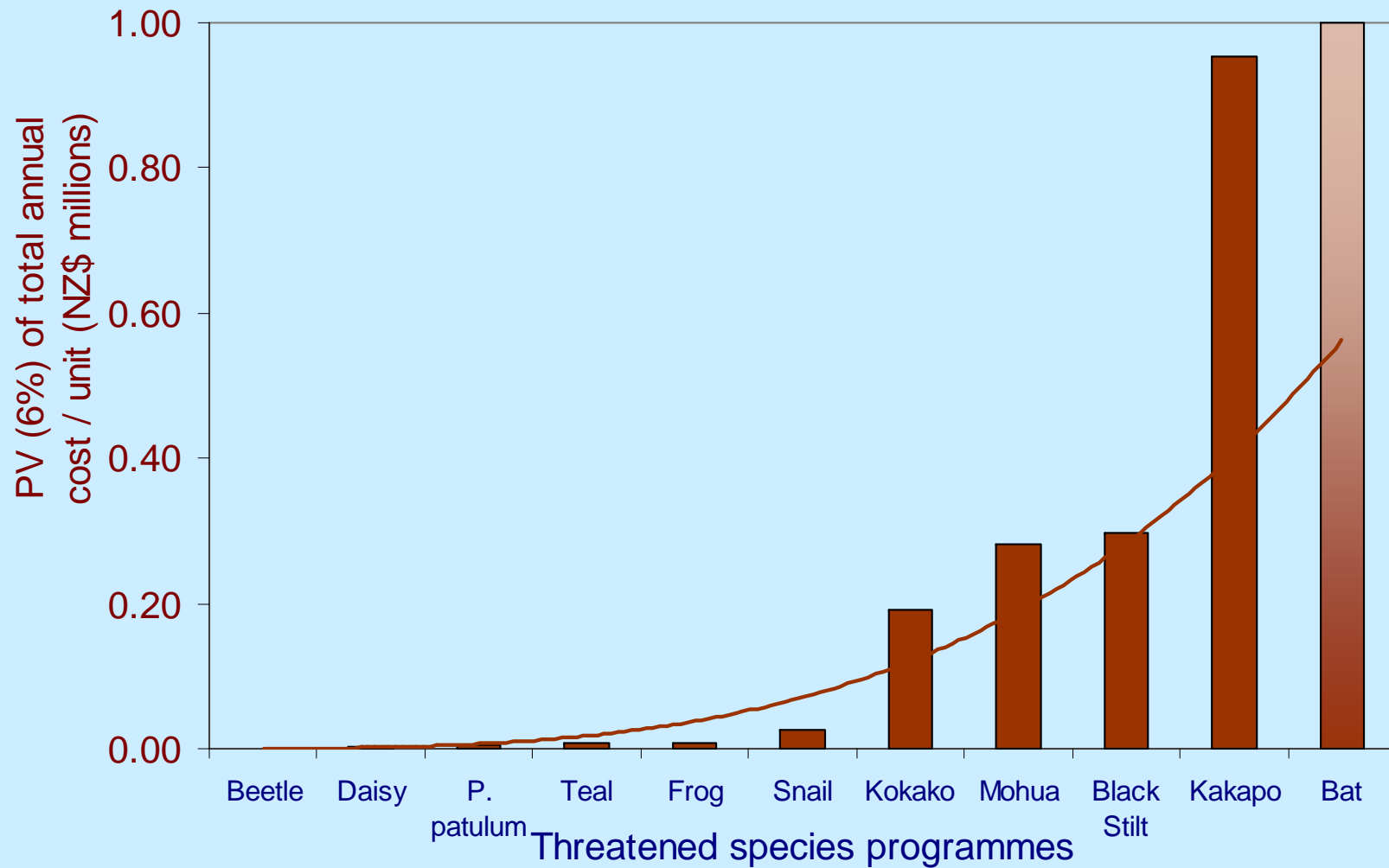
Habitat area



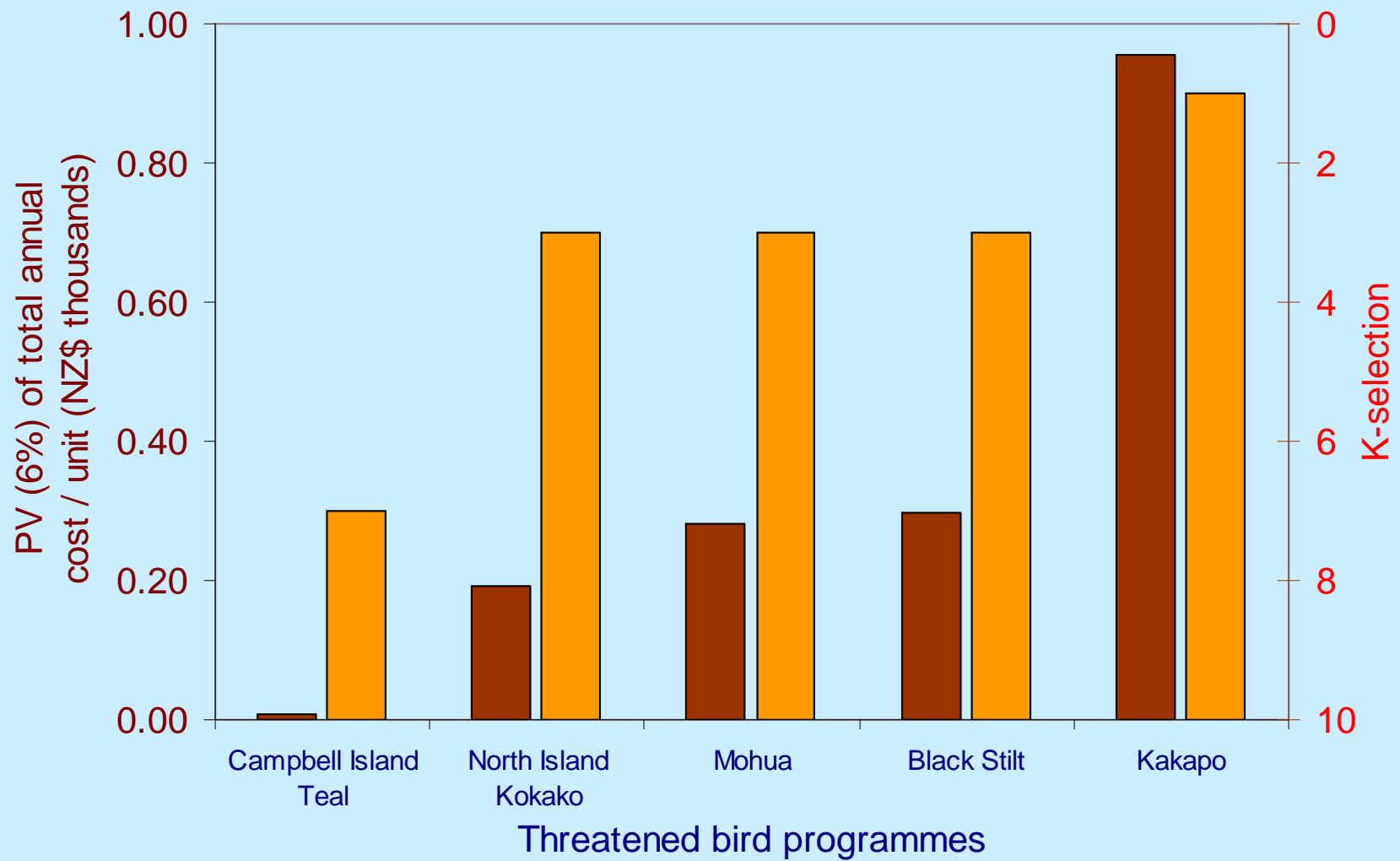
Type of threat



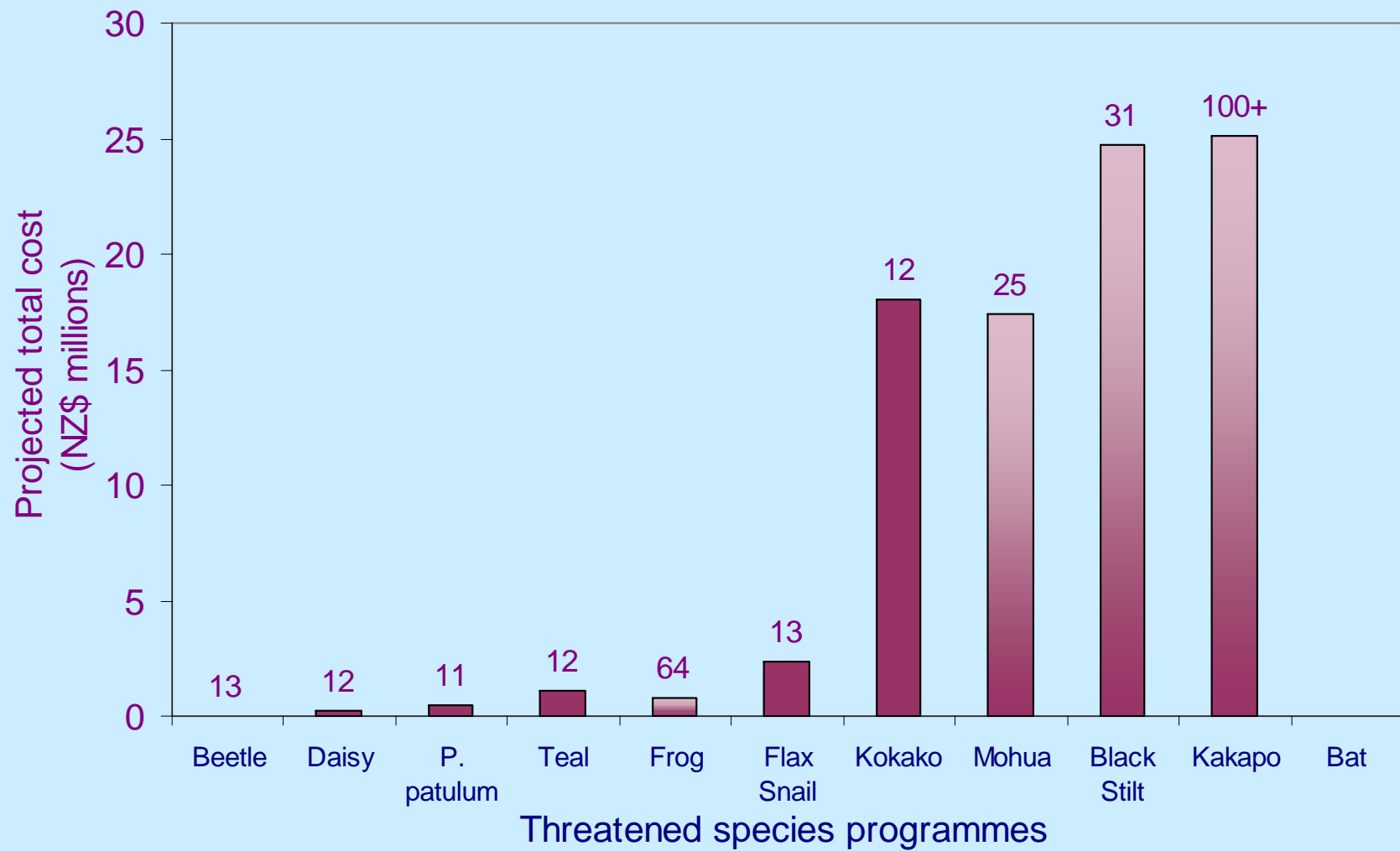
PV of cost per unit 2003-2012



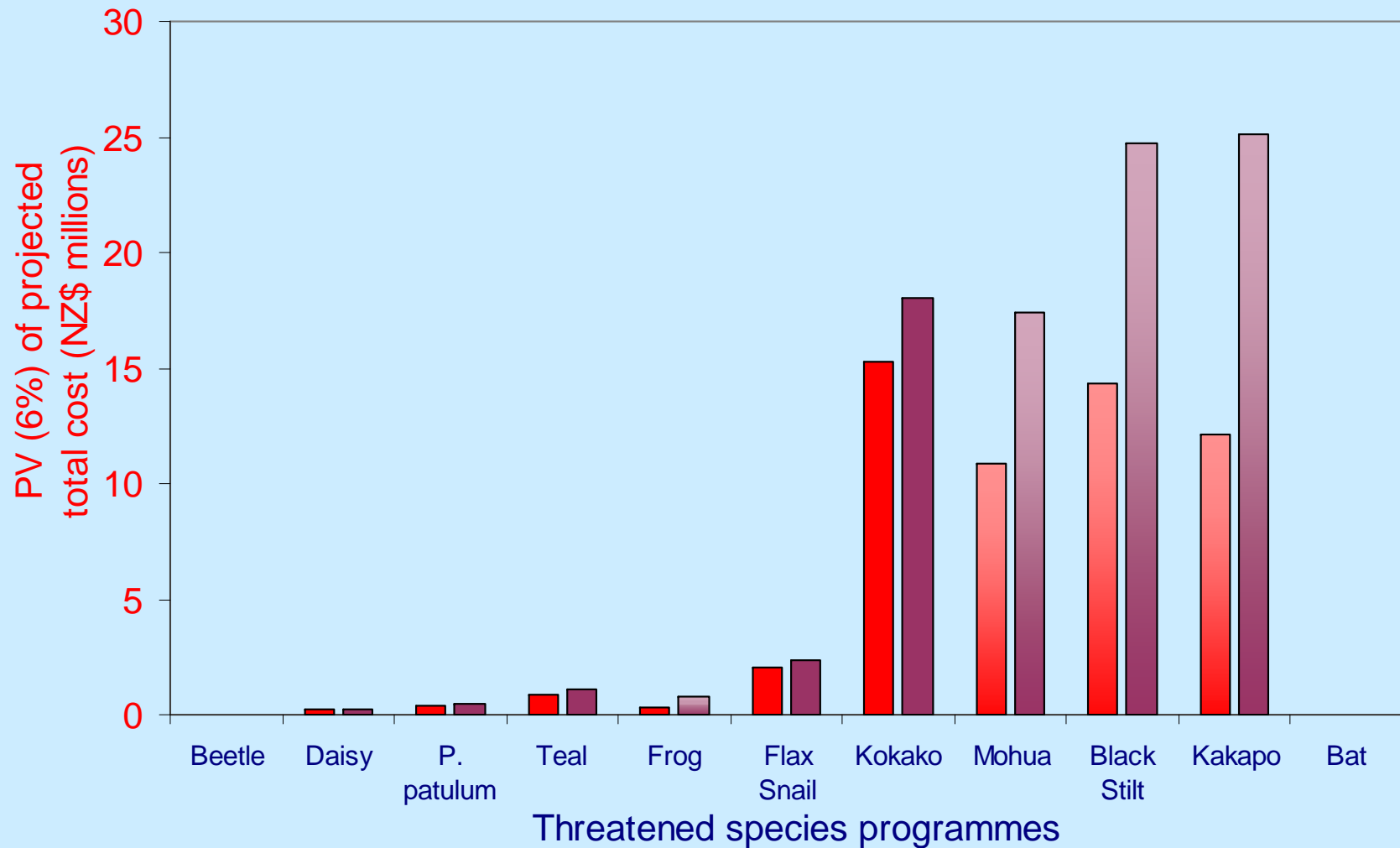
K-selection



Projected total costs



PV of projected total costs



Conclusions

- Habitat area and taxon are key factors.
- Other factors - level of existing knowledge?
- A statistically estimated model.
- Include estimates of cost and recovery rate in species recovery plans.
- Cost information - funding applications, allocation of funding, and cost-effectiveness analysis.

