

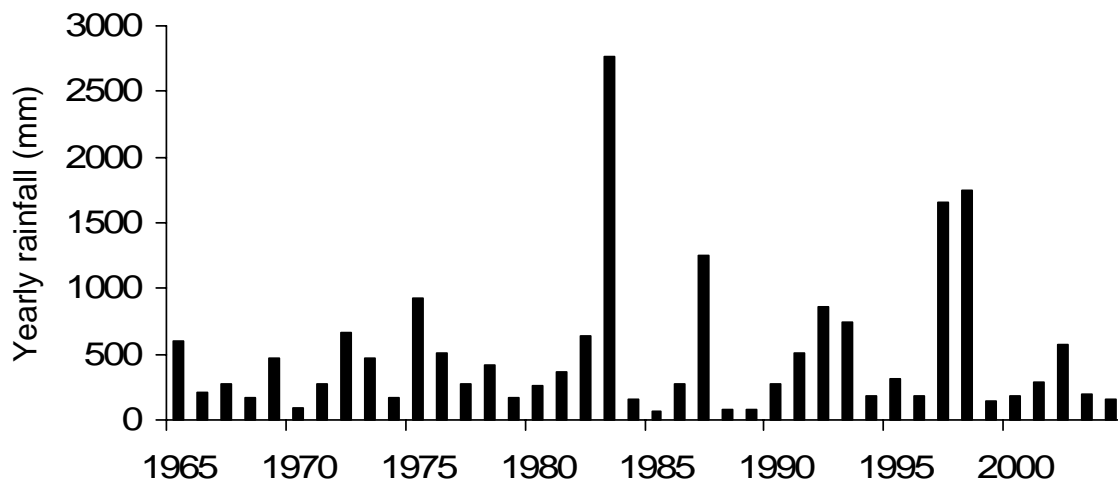
**Electronic Appendix A.** Coefficients of variation (%) for *G. fortis* beak dimensions in each of the samples. Shown are values for all birds combined and values for mature males only (distinguished by their black plumage).

Sample	<u>All birds</u>			<u>Mature males</u>		
	Length	Depth	Width	Length	Depth	Width
Academy 1964	8.8	12.6	8.9	8.5	12.5	8.9
Academy 1968	8.0	11.2	-	7.8	11.4	-
Academy 1973 (Feb.)	9.5	-	10.0	7.9	-	11.7
Academy 1973 (Nov.)	8.8	12.7	11.4	8.8	11.3	9.4
Academy 1988	9.3	14.2	11.9	7.9	11.9	10.3
Academy 1999-2002	8.7	11.9	10.6	9.4	13.0	10.3
Academy 2003	7.4	9.7	9.2	8.7	11.6	11.1
Academy 2004	8.3	11.1	11.0	8.3	11.2	12.0
Borerro 1973 (Apr.)	5.8	7.7	6.8	2.7	3.4	5.5
Borerro 1973 (Dec.)	5.7	7.6	7.2	5.4	5.2	7.2
Borerro 1975	6.8	7.9	6.4	6.1	8.0	6.1
Borerro 2004	6.9	10.1	9.0	7.1	9.9	8.9
El Garrapatero 2003	10.1	12.1	11.6	9.2	12.2	11.9
El Garrapatero 2004	8.9	11.9	11.8	9.3	11.9	12.4
El Garrapatero 2005	8.6	12.0	11.0	8.8	12.0	10.9

**Electronic Appendix B.** Results of Bayesian mixture models for PC1 based on either beak length, depth, and width, or only beak length and depth.

Sample	<u>Length/depth/width</u>			<u>Length/depth</u>		
	N	$\Delta AIC_c$	Weight	N	$\Delta AIC_c$	Weight
Academy 1964	110	14.1	>0.99	150	27.4	>0.99
Academy 1968	327	58.2	>0.99	327	58.2	>0.99
Academy 1973 (Feb.)	35	1.2	0.65	-	-	-
Academy 1973 (Nov.)	58	4.5	0.90	58	7.4	0.98
Academy 1988	53	6.0	0.95	53	3.0	0.81
Academy 1999-2002	119	5.0	0.92	119	5.9	0.95
Academy 2003	125	7.8	0.98	125	-3.1	0.17
Academy 2004	173	7.8	0.98	173	4.6	0.91
Borerro 1973 (Apr.)	122	-3.1	0.18	63	-5.2	0.07
Borerro 1973 (Dec.)	72	-5.3	0.06	72	-7.8	0.02
Borerro 1975	84	-7.8	0.02	83	-8.2	0.02
Borerro 2004	130	9.2	0.99	130	3.3	0.84
El Garrapatero 2003	55	9.2	0.99	55	5.43	0.94
El Garrapatero 2004	114	34.4	>0.99	114	30.3	>0.99
El Garrapatero 2005	180	54.5	>0.99	180	47.9	>0.99

**Electronic Appendix C.** Rainfall data for Academy Bay, as recorded by personnel at the Charles Darwin Research Station.



**Electronic Appendix D.** Frequency histogram for PC1 in the 1973 Borrero Bay sample.

See the caption of Fig. 3 for details.

