Ecological Archives **E091-204-A3**

Christine M. Hunter, Hal Caswell, Michael C. Runge, Eric V. Regehr, Steve C. Amstrup, and Ian Stirling. 2010. Climate change threatens polar bear populations: a stochastic demographic analysis. *Ecology* 91:2883–2897.

Appendix C Figures and tables: IPCC models and bootstrap sampling results

Table C-1: Ten IPCC AR-4 GCMs used to forecast the $ice(t)$ covariate. IPCC model name, country of origin, approximate grid resolution (degrees), and the number of runs used for demographic projections.

IPCC model name	Country	Grid resolution	Runs
ncar_ccsm3_0	USA	1.0×1.0	8
cccma_cgcm3_1	Canada	3.8×3.8	1
cnrm_cm3	France	1.0×2.0	1
gfdl_cm2_0	USA	0.9×1.0	1
giss_aom	USA	3.0×4.0	1
ukmo_hadgem1	UK	0.8×1.0	1
ipsl_cm4	France	1.0×2.0	1
miroc3_2_medres	Japan	1.0×1.4	1
miub_echo_g	Germany/Korea	1.5×2.8	1
mpi_echam5	Germany	1.0×1.0	1

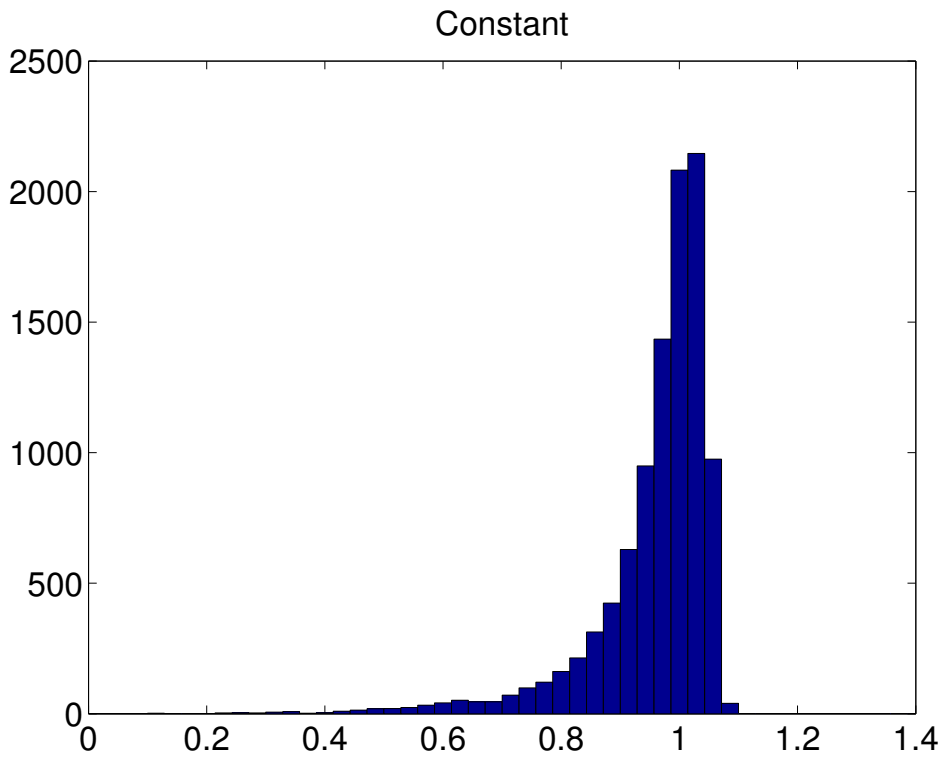

Figure C-1: Bootstrap distribution of the deterministic population growth rate λ calculated from the time-invariant model.

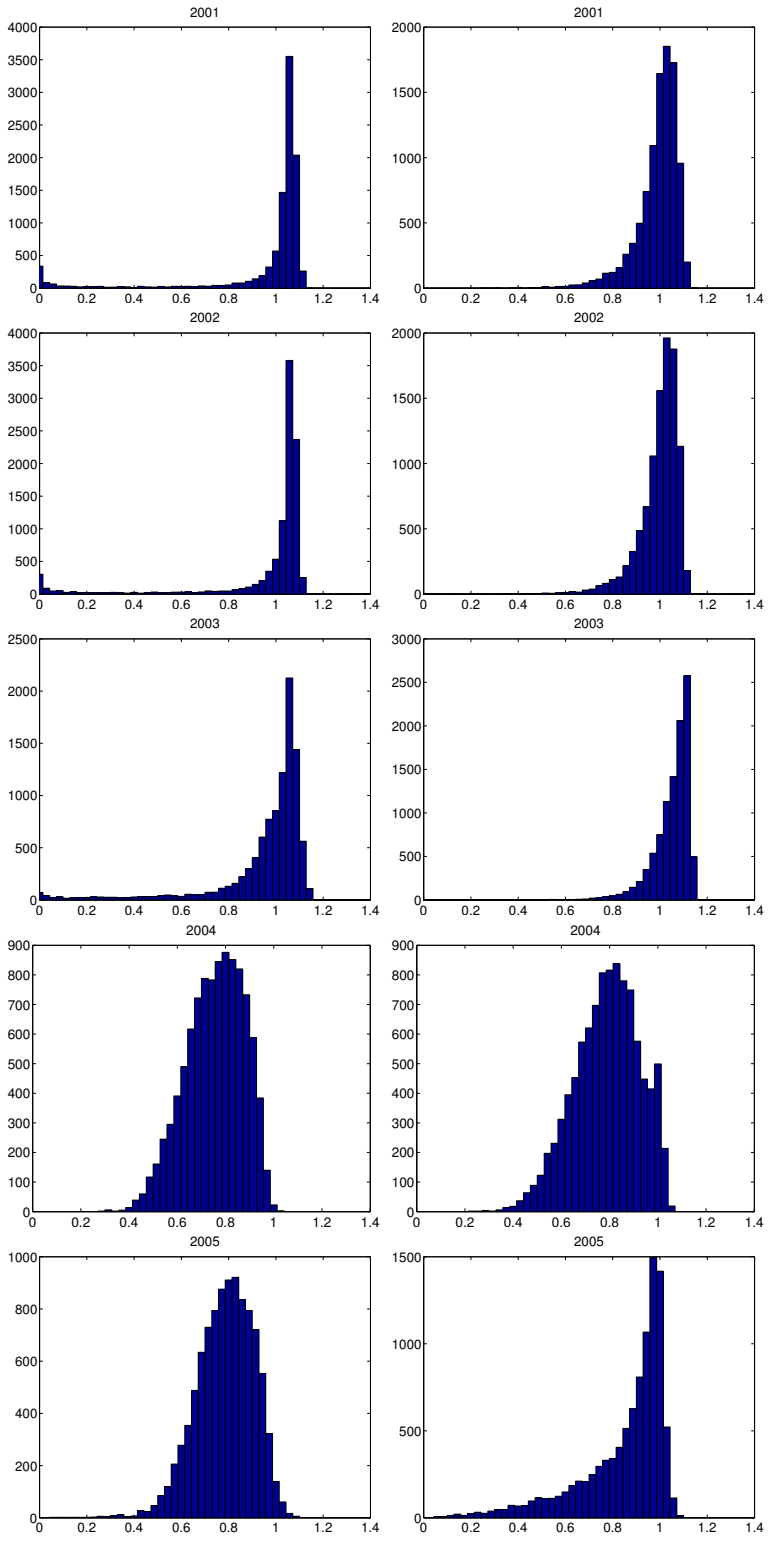

Figure C-2: Bootstrap distributions of the deterministic population growth rate λ calculated for each year 2001–2005, from the parametric model set (left column) and the nonparametric model set (right column).

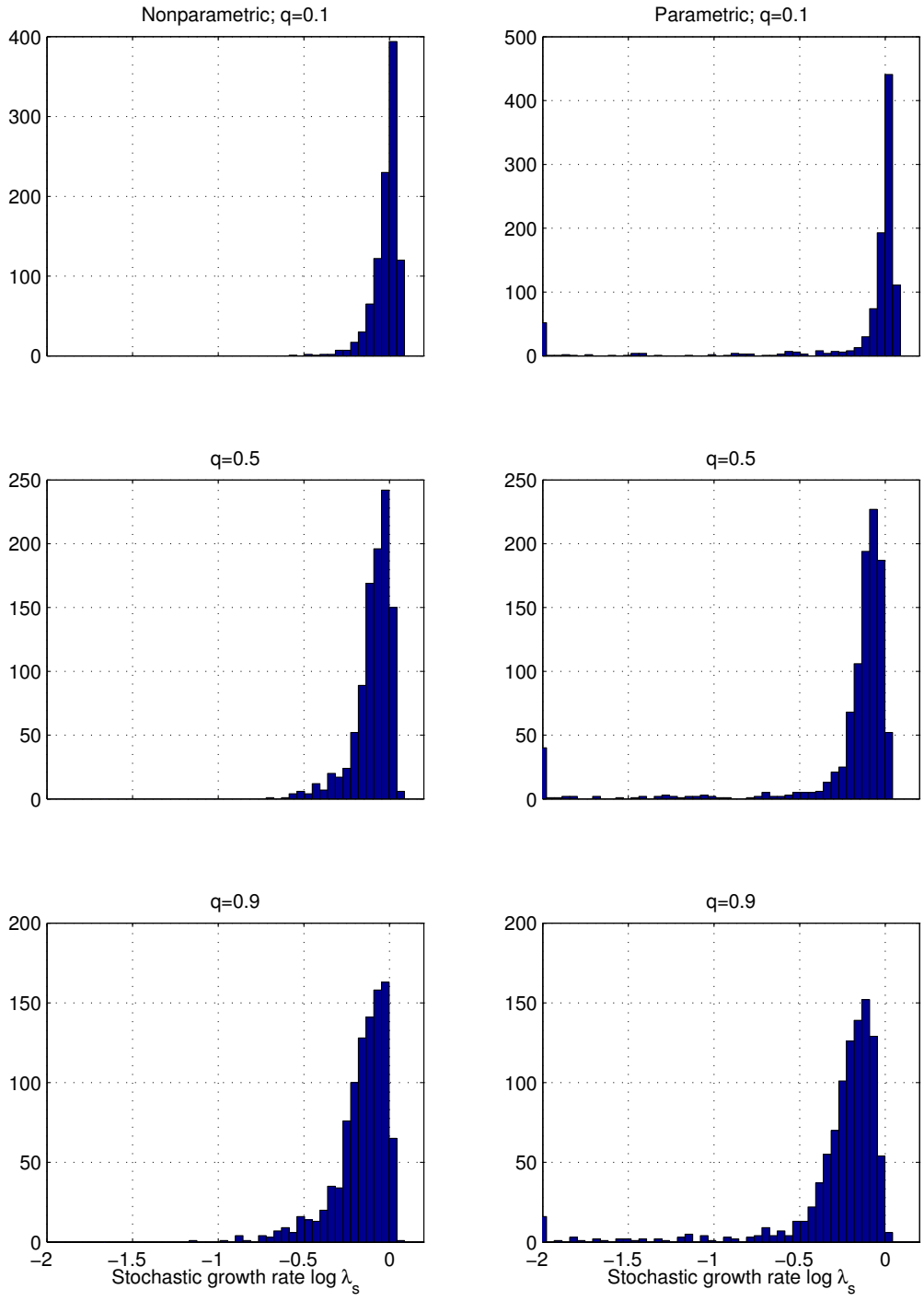

Figure C-3: Bootstrap distribution of the stochastic growth rate $\log \lambda_s$ for several values of the frequency q of poor ice years. The long left-hand tail of the results from the parametric model set is due to the amplification of the response to low sea ice, coupled with the asymmetry of the logistic transform for probabilities close to 1.