

## University of Groningen

### Coping with uncertainty

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Propositions associated with the PhD thesis

COPING WITH UNCERTAINTY  
ADAPTING TO STOCHASTICITY IN AN UNPREDICTABLE TROPICAL ENVIRONMENT

Joseph M. Mwangi

1. The tropical environment harbors a large diversity of life history strategies that do not fit the life history ecology framework based on studies in temperate regions  
*This thesis, Stutchbury and Morton 2001*
2. Whereas in predictable seasonal environments, evolutionary adaptations of annual programs of body mass change have been found, in unpredictable or non-seasonal environments, phenotypically plastic ability to adjust to the environment in real time at the moment may be the better strategy  
*This thesis chapter 4*
3. Considering the diversity of ecologies of tropical birds, it is absurd to suppose that any one hypothesis would explain every possible combination of facts.  
*After Brown and Britton 1980.*
4. No single behavioral and/or physiological phenotype will be consistently optimal  
*Ricklefs and Wikelski 2002, This thesis*
5. In stochastic environments, birds do not anticipate environmental conditions, yet they adjust their behavior and physiology to match environmental conditions.  
*This thesis*
6. In light of the recent climatic changes that have disrupted the fit between evolved annual programs and environmental variation, it is becoming increasingly important to understand the relative contributions of genetic adaptation and phenotypic plasticity to coping with socio-environmental factors.  
*This thesis chapter 4 and 5*
7. Scientists tend to confirmation bias; they are constrained in their scientific arguments by their field of expertise during interpretation of findings
8. Ciathanaga ikigua, itiathanaga ikiumbuka.  
Birds flock together when they come to feed, but each individuals leaves at its own when it's full.  
*Kikuyu proverb*
9. The oak fought the wind and was broken, the willow bent when it must and survived.  
*Robert Jordan 1993. The Fires of Heaven*