Genetic diversity in the lion (panthera leo (Linnaeus 1758)) : unravelling the past and prospects for the future

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Propositions

Thesis:

GENETIC DIVERSITY IN THE LION
(*Panthera leo* (Linnaeus 1758)):
Unravelling the Past and Prospects for the Future

by Laura Bertola

1. For long-term conservation of a species, it is desirable to maintain the maximum of genetic lineages, which makes phylogeography an important component of conservation biology. (this thesis)

2. Uneven sampling in the geographic range of species may lead to false interpretations regarding the distinctiveness of a population. (Chapter 3)

3. Frequency-based markers may not give insight into evolutionary relationships if the population has gone through one or more severe bottlenecks. (Chapter 3)

4. Despite indications for hybridization between (sub-Saharan) African and Asiatic lions in India from historic publications, there is no indication from genetic data that this has actually occurred. (this thesis)

5. The pre-Darwinian nomenclature that we use to classify the lumpy continuum of living organisms in space and time should not trick us into believing that the species we name are necessarily sensible evolutionary, ecological or conservation units. (Isaac *et al.,* 2004)

6. Beyond the problem of extinction of species per se is the even more complex problem of the extinction of interactions.

7. Phylogenetic diversity is a more suitable measure for biodiversity than species richness, because evolutionary distance is taken into account.

8. Although hybridization of subspecies will affect the genetic integrity of these individuals, human-mediated translocations and resulting hybridization may be a useful tool to ensure survival of a population in some extreme cases.

9. When working towards a solutions for a problem, preconceived ideas may be a larger complication than ignorance. (derived from lectures by Hans Rosling)

10. The capitalist view on maximizing returns is very useful, as long as financial capital is not the only capital that is being considered.

11. The strong emphasis on predictable results and valorization limits opportunities for serendipity.

12. Possibly due to physical nature of intervals between pitches, bullfinches tend to “improve” songs that are taught to them by human teachers who whistle off-key. (derived from lectures by Tim Birkhead)