

3 • *Taxonomic Status of the African Buffalo*

J. MICHAUX, N. SMITZ AND P. VAN HOOFT

Introduction

Because the African buffalo (*Syncerus caffer*) exhibits extreme morphological variability across its range (e.g. body size and weight, coat colouration, horn size and curvature), its taxonomic status has been the subject of many debates over time (reviewed in Chapter 2). The most recent update of the IUCN Red List recognized four African buffalo subspecies: *S. c. nanus*, *S. c. brachyceros*, *S. c. aequinoctialis* and *S. c. caffer*. Two genetic clusters can be identified based on maternally inherited mitochondrial DNA (mtDNA): one cluster encompassing the three subspecies from West and Central Africa (*S. c. nanus*, *S. c. brachyceros*, *S. c. aequinoctialis*); the other cluster consisting of the *S. c. caffer* subspecies from East and Southern Africa. The amount of genetic differentiation between these two clusters is typical of that of subspecies in other African bovids (Smitz et al., 2013). The same picture emerges with the paternally inherited Y-chromosome: three haplotypes (genetic variants) among West and Central African populations and one unique haplotype among East and Southern African populations (Van Hooft et al., 2002). Thus, with both mtDNA and Y-DNA *S. c. caffer* emerges as a distinct genetic cluster. The only exception may be *S. c. caffer* in Angola and Namibia. There, two mtDNA haplotypes and one Y-haplotype typical of West and Central Africa were observed (Van Hooft et al., 2002). However, these latter observations should be taken with caution considering these genotypes were derived from zoo animals.

Nevertheless, the spatial genetic pattern based on microsatellites

Contents

| | |
|--|------------|
| <i>List of Contributors</i> | page xii |
| <i>Foreword</i> | xix |
| Anthony R. E. Sinclair | |
| <i>Preface</i> | xxi |
| <i>Acknowledgements</i> | xxvii |
| | |
| 1 African Buffalo and the Human Societies in Africa: Social Values and Interaction Outcomes | 1 |
| B. Mukamuri, E. Garine Wichtitsky, E. Gandiwa, A. Perrotton, O. L. Kupika and L. Monin | |
| | |
| Part I Conservation | |
| D. Cornélis | |
| | |
| 2 The Evolutionary History of the African Buffalo: Is It Truly a Bovine? | 25 |
| H. H. T. Prins, J. F. de Jong and D. Geraads | |
| | |
| 3 Taxonomic Status of the African Buffalo | 49 |
| J. Michaux, N. Smitz and P. van Hooft | |
| | |
| 4 Conservation Status of the African Buffalo: A Continent-Wide Assessment | 66 |
| D. Cornélis, P. C. Renaud, M. Melletti, D. Fonteyn, H. Bonhotal, M. Hauptfleisch, A. Asefa, T. Breuer, L. Korte, P. Scholte, P. Elkan, E. Kohi, S. Mwiu, S. Ngene, P. Omondi, S. P. Tadjó, T. Prin, A. Caron, H. H. T. Prins and P. Chardonnet | |
| | |
| Part II Ecology | |
| H. H. T. Prins | |
| | |
| 5 Habitat, Space Use and Feeding Ecology of the African Buffalo | 133 |

Ecology and Management of the African Buffalo

Edited by
Alexandre Caron
Daniel Cornélis
Philippe Chardonnet
Herbert H. T. Prins

