

# THE BLACK RHINO NEEDS A TAXONOMIC REVISION FOR SOUND CONSERVATION

BY KEES ROOKMAAKER

The status of the subspecies of the black rhinoceros (*Diceros bicornis*) is in a confused state. At the African Rhino Workshop in Cincinnati in 1986, it was proposed to recognize four conservation units within the black rhino for practical purposes of metapopulation management (Du Toit *et al.*, 1987: 1). These units were given vernacular names according to the parts of the African continent where the populations could be found: western, eastern, south-western and south-central. It was also noted that the taxonomy of the black rhinoceros was insufficiently known, and that the seven subspecies recognized by Groves (1967) in the last revision needed further examination. Some new data were summarized by Du Toit (1987), but so far the full details have not been published. In the 1990 Conservation Action Plan for African Elephants and Rhinos, the Cincinnati proposal was upheld, which resulted in the recognition of 'four black rhino ecotypes or "subspecies" conservation units' (Cumming *et al.*, 1990: 13). This was the first time that the units were called 'ecotypes', although the term remained undefined. Around the same time, the conventional subspecies were used to separate the captive population of the black rhino into two groups, *D. b. michaeli* for East African animals and *D. b. minor* for South African animals (Klós and Frese, 1991; see Rookmaaker 1998: 160). Unfortunately, very soon the formal subspecific names started to be used for the informal conservation units or ecotypes, thereby effectively reducing the number of subspecies from seven to four, without a detailed analysis of the systematic status of the various populations across the continent. I have previously recorded my unease about this situation (Rookmaaker, 1995).

The transition from conservation units via ecotypes to subspecies was formalized in the most recent authoritative Conservation Action Plan for the African Rhinos, compiled by Emslie and Brooks (1999) and endorsed by the African Rhino Specialist Group. Here the black rhinoceros was divided into four subspecies, recognizing that 'conservationists sometimes refer to the black rhino subspecies as ecotypes.' The historical distribution of each subspecies was shown on a map (Emslie and Brooks, 1999: 3) and listed elsewhere in the Action Plan, resulting in four groups:

1. Western black rhino, *Diceros bicornis longipes* (Cameroon, Central African Republic, Chad);
2. Eastern black rhino, *D. b. michaeli* (Ethiopia, Kenya, Rwanda, Somalia, Sudan, Tanzania, Uganda);
3. South-western black rhino, *D. b. bicornis* (Angola, Botswana, Namibia, South Africa);
4. South-central black rhino, *D. b. minor* (Angola, Botswana, Congo, Malawi, Mozambique, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe).

This shows four major deviations from Groves (1967), some of which were previously advocated by Du Toit (1987): *D. b. chobiensis* was merged with *D. b. minor*, and the nominate subspecies *D. b. bicornis*, earlier supposed to be extinct (Rookmaaker and Groves, 1978), was resurrected to include populations in northern Namibia. Furthermore, *D. b. ladoensis* was merged with *D. b. michaeli*, and *D. b. brucii* was merged with *D. b. michaeli*. The last action deviates from the original conservation units proposed in 1986, where the (extinct?) populations in Somalia and Ethiopia were part of the western group.

When informal conservation units are changed into formal subspecies, there are likely to be nomenclatural implications. First, if the border between the ranges of *D. b. bicornis* and *D. b. minor* in South Africa is correctly interpreted by Emslie and Brooks (1999: 3, map 2.1), *D. b. minor* (Drummond, 1876) should be replaced by *D. b. keitloa* (A. Smith, 1836), which has a well-defined type locality in the Magaliesberg area, N.W. Province. Secondly, if the eastern black rhino occurred in the range stated by Emslie and Brooks, *D. b. michaeli* (Zukowsky, 1965) is not the earliest name available for that taxon. To comply with the rules of zoological nomenclature (ICZN, 1999, article 23), it should then be renamed *D. b. brucii* (Lesson, 1842). Of course, *D. b. brucii* is also earlier than *D. b. longipes* (Zukowsky, 1949) if names are to be given according to the divisions proposed in Cincinnati.

I am sure that none of these changes would be welcomed by those involved with conservation in the field or in zoological gardens. As the attempt is generally made to keep conservation units within their original ranges, taxonomic reinterpretations could have wide-ranging effects. It is not possible to redefine the subspecies of the black rhinoceros on an *ad hoc* or geographically limited basis. Any revision must include the material from regions where the animal now no longer exists to fully understand the variability within the species. Hence this is a time-consuming and complicated project, even though much of the documentation is available in the Rhino Resource Center ([www.rhinoresourcecenter.com](http://www.rhinoresourcecenter.com)). Although taxonomic studies may not be high on the list of funding agencies, they reflect the natural diversity which we try to preserve (Rookmaaker, 2005). To avoid further confusion and future mistakes, a taxonomic revision of the black rhinoceros should be an urgent priority.

## References

- Cumming, D., Du Toit, R.F., and Stuart, S.N. (1990): *African Elephants and Rhinos: Status Survey and Conservation Action Plan*. IUCN, Gland.
- Du Toit, R.F. (1987): The existing basis for subspecies classification of black and white rhinos. *Pachyderm* 9: 3–5.
- Du Toit, R.F., Foose, T.J., and Cumming, D.H.M. (1987): Proceedings of African Rhino Workshop, Cincinnati, October 1986. *Pachyderm* 9: 1–33.
- Emslie, R.H., and Brooks, M. (1999): *African Rhinos: Status Survey and Conservation Action Plan*. IUCN/SSC African Rhino Specialist Group, Gland and Cambridge.
- Groves, C.P. (1967): Geographic variation in the black rhinoceros, *Diceros bicornis* (L., 1758). *Zeitschrift für Säugetierkunde* 32 (5): 267–276.
- ICZN – International Commission on Zoological Nomenclature (1999): *International Code of Zoological Nomenclature*, 4th ed. ICZN, London.
- Klös, H.-G., and Frese, R. (1991): *International studbook of African rhinoceroses*

- (*Diceros bicornis* / *Ceratotherium simum*), No. 4, 31.12.1990. Zoologischer Garten, Berlin.
- Rookmaaker, L.C. (1995): Subspecies and ecotypes in the black rhinoceros. *Pachyderm* 20: 39–40.
- Rookmaaker, L.C. (1998): *The Rhinoceros in Captivity*. SPB Academic Publishing, The Hague.
- Rookmaaker, L.C. (2005): Review of the European perception of the African rhinoceros. *Journal of Zoology, London* 265: 365–376.
- Rookmaaker, L.C., and Groves, C.P. (1978): The extinct Cape rhinoceros, *Diceros bicornis bicornis* (Linnaeus, 1758). *Säugetierkundliche Mitteilungen* 26 (2): 117–126.

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