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# SUBSPECIES AND ECOTYPES OF THE BLACK RHINOCEROS

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The taxonomy of the black rhinoceros (*Diceros bicornis*) has still not been clarified at the level of subspecies. The current classification was proposed initially by Groves (1967), with later modifications (Groves, 1993). Unfortunately, it was cursorily dismissed by the rhinoceros experts (Du Toit, 1987), because it was based on very small skull samples. It is obvious that further research using larger sets of skulls and bones for conventional measurements, or using new DNA techniques, would clarify many uncertainties. However, the original classification could have formed a good basis for reflecting the diversity within the species and for providing a framework to plan conservation programmes aimed at maintaining the genetic differences within the black rhinoceros populations. A revision to the classification is contemplated, but not yet published (Hillman Smith & Groves, 1994). Today, therefore, there is no accepted subspecific classification of the black rhinoceros. This vacuum, combined with the proposal by the African Rhino Workshop in 1986 to focus on four 'conservation units' or 'ecotypes' (*Pachyderm* 9, 1987), has led to several taxonomically confusing statements in recent papers on rhinoceros conservation and has not really led to any greater understanding or even served a practical purpose.

Many authors use the 'ecotype' classification as if each ecotype represents a subspecies and attach names to them accordingly. For instance, Hall-Martin & Knight (1994) wrote about the black rhinoceros of Namibia as the 'south-western ecotype *Diceros bicornis bicornis*', implying that the animals in northern Namibia today cannot be differentiated from the supposedly extinct, large, typical subspecies of the Cape Province (Rookmaaker & Groves, 1978; Rookmaaker, 1989; Meester *et al.*, 1986). Of course, this could well be correct. Earlier, Hall-Martin (1985) argued that the black rhinos of Etosha in northern Namibia were likely to be the closest existing relatives ('taxonomically, genetically, geographically and ecologically') to those formerly found in the Cape Province of South Africa. O'Ryan *et al.* (1994) studied variation in restriction enzyme profiles of mitochondrial DNA of 33 wild black rhinos and found, using this technique, that the rhinos

from Zululand matched with one specimen from Caprivi (Namibia) but differed from those in Etosha (Namibia) and East Africa. While there are arguments that black rhinos from some parts of northern Namibia may not be distinguishable on the subspecific level from the typical subspecies, this conclusion may be premature until the reasons for this new insight are set out in detail. It needs to be shown how the sizes of the existing specimens in Namibia relate to those of the extinct population in the Cape Province, and even to specimens presumed to belong to taxa like *Diceros b. niger*, *Diceros b. occidentalis*, *Diceros b. chobensis* and even *Diceros b. minor*. Until such a time, it is acceptable to use the concept of a 'south-western ecotype' as a basis for conservation measures, but this should not be confused with the use of formal subspecific names.

The ecotypes are poorly defined, especially in border situations. There is general agreement that black rhinos living in regions from Natal to southern Tanzania are similar, to be called either *Diceros b. minor* or the 'south-central ecotype', while the black rhinos in northern Tanzania and most of Kenya, called either *Diceros b. michaeli* or the 'eastern ecotype' are also considered similar. The status of the so-called 'southwestern ecotype' represented by the viable population in parts of Namibia is taxonomically unclear. However, the uncertainty should not affect practical issues, as the population can be kept separate either as the 'south-western ecotype' or as a taxonomically separate population of uncertain status.

It is my proposal to re-instate the existing taxonomy of subspecific level, as it was proposed by Groves (1967), with all the necessary later amendments. Used in a wise perspective, any differences in taxonomic interpretation should not interfere with strategies designed to keep the species alive for future generations.

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A black rhinoceros in Kenya