# ADDAX NASOMACULATUS

# **1. TAXONOMY AND NOMENCLATURE**



Female Addax.Termit.1998.Niger. © Cdt Hama A. Souleymane-DFPP-Niger.

## 1.1. Taxonomy.

Addax nasomaculatus belongs to the tribe Hippotragini, sub-family Hippotraginae, family Bovidae, which comprises one extinct species, seven surviving species, and two evolutionary distinct subspecies in genera Oryx, Addax and Hippotragus (Simpson, 1945; Murray, 1984; Corbet et Hill, 1986; Wacher, 1988). All hippotraginids are adapted to the exploitation, generally at low density, of difficult, low-productivity habitats (Kingdon, 1982; Murray, 1984; Wacher, 1988; Beudels, 1993). The genus Addax is comprised of a single species, adapted to the desert.

## 1.2. Nomenclature.

## 1.2.1. Scientific name.

*Addax nasomaculatus* (De Blainville, 1816). Discribed as *Cerophorus nasomaculata* de Blainville, 1816. Bull. Sci. Soc. Philom. Paris, 1816:75. Type locality: None given. Lydekker (1914:148) stated it was "probably

Senegambia", but Grubb (2005) noted that it was more probable that British hunters or collectors obtained Addax from the Tunisian Sahara, to which he restricted the type locality.

#### 1.2.2. Synonyms.

Antilope nasomaculatus, Antilope addax, Addax nasomaculatus addax, Antilope naso-maculata, Cerophorus nasomaculata, Antilope suturosa, Antilope mytilopes, Antilope gibbosa, Oryx addax, Oryx naso-maculatus, Addax suturosus, Addax addax

#### 1.2.3. Common names.

English : Addax French : Addax, Antilope addax, Antilope de Mendès German: Mendes Antilope Arabic : Begaar el Ouach, Akash, Abu-Akach, Anjidohl, Auel, Bakra el onash, Tamita Tamashek: Amellal Toubou: Turbo



Niger. Temet. Aïr. © John Newby



#### 1.2.4. Description.

A predominantly white, stocky-bodied, medium-sized antelope inhabiting the sand seas and gravel plains of the Sahara. Head light grey or beige, with contrasting white patches in front of the eyes, linked across the bridge of the muzzle. Small white patches behind the eyes. Nose beige, lips and chin white. Crown and forehead sporting a prominent, wig-like tuft of dark brown hair. Ears white with a long basal tuft of pale hairs. With the exception of the throat and chest, which are beige, overall body colour is bright matte white. During the hot season (Apr-Oct), pelage is short, but in the colder months (Nov-Mar) it lengthens on the neck, chest, shoulders, back and flanks, becoming greyer, a characteristic especially obvious in Addax held in zoos with cold winter climates (Renshaw, 1902). Adults of both sexes develop a beige fringe of variable length on the lower neck. In Niger, old adult males can develop a dark brown front coat (Ascani, pers. comm). Legs white with beige patches on the knees. Hooves broad and splayed. Tail short and white, sporting a sparse tuft of dark terminal hairs. Other than slight differences in size, weight and horn development in adults, sexes essentially similar. Nipples: 2 + 2 = 4.

Both sexes bear corkscrew shaped horns, which grow upwards and outwards, reaching over one metre in length. The horns of the adult male are stockier than those of the female, often having two to two-and-a-half turns to the female's one-and-a-half to two. Horns heavily annulated over the first two-thirds of their length in both sexes. Over time, and with violent sparring, the horns of the male may become lost, damaged or blunted.

The Addax probably takes its name from the vernacular Arabic 'agas or 'adas. The specific name nasomaculatus - meaning 'spotted nosed' – refers to the contrasting white patches on the otherwise darker head.

TL : 125 - 170 cm T : 30 - 32 cm H : 105 - 115 cm weight : 70 - 150 kg

# 2. BIOLOGY OF THE SPECIES

## 2.1. General biology

#### 2.1.1. Habitat.

Precise data on the habitat of *Oryx dammah* are based mainly on the Sahelian populations and have been collected in Chad (Malbrant, 1952; Gillet, 1965, 1969; Newby, 1974, 1988; Dragesco-Joffé, 1993), in Niger and in Mali (Lhote, 1946; Brouin, 1950; Malbrant, 1952; Grettenberger and Newby, 1990) and, to a lesser extent, in Sudan & Clater and Thomas, 1899; Wilson, 1978, 1980). There is also precise information for the Atlantic Sahara (Valverde, 1957). There does not seem to be any first-hand information on the ecology of the species in the Libyan Desert of Middle Egypt (Kock, 1970; Osborn and Helmy, 1980), or, *a fortiori*, in the Mediterraneo-Saharan zone. The habitat of the species in these regions can only be understood by extrapolation of the Sahelian information, combined with examination of the sparse data on stable presence and the historically likely distribution of habitats. All the sources converge to establish a typically Sahelian, in particular, north Sahelian, subdesert character of the habitat of the Scimitar-horned Oryx.

The Sahelian populations of the Scimitar-horned Oryx seem to have fed, during the hot, dry season, from March to June, on perennial grasses of the Sahelian steppes, notably *Panicum turgidum, Aristida mutabilis* and other species of *Aristida* (Gillet, 1965; Newby, 1974, 1988; Dragesco-Joffé, 1993), the fallen pods of *Acacia tortilis* (Malbrant, 1952; Gillet, 1965; Newby, 1974, 1988; Dragesco-Joffé, 1993), foliage from persistent shrubs, including had, *Cornulaca monacantha, Chrozophora senegalensis, Cassia italica (C. obovata)* and a few herbs, including *Heliotropium strigosum* (Newby, 1974; Dragesco-Joffé, 1993). *Panicum turgidum* seems to also offer cover for newborn calves (Newby, 1974). During the rainy season, from July to September, and during the cold months, from November to February, the Oryx use mainly temporary pastures formed by the emergence of annuals, including the grasses *Cenchrus biflorus* (cram-cram), *Dactyloctenium aegyptiacum, Echinochloa colona*, the Aizoaceae *Limeum viscosum*, as well as young green shoots of shrubs belonging to the Fabaceae (*Indigofera*), Nyctaginaceae (*Boerhavia*), Amarantaceae (*Aerva*) (Gillet, 1965; Newby, 1974, 1988; Dragesco-

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Joffé, 1993); they went north at this time, following the formation of temporary pastures (acheb, gizu) to the edge of the desert (Gillet, 1965; Wilson, 1978; Newby, 1988). Water was provided by the formations of annuals or by other newly green plants, or, in their absence, by succulents growing along wadis and in depressions of the Sahel (Newby, 1988) that remain green until far into the dry season (Newby, 1974). The wild melon, *Colocynthis vulgaris* (*Citrullus colocynthis*), particularly characteristic of the Sahelian subdesert steppes, plays, from this point of view, a particularly important role (Brouin, 1950; Malbrant, 1952; Gillet, 1965; Newby, 1974, 1988; Dragesco-Joffé, 1993). Shade, an essential element of the habitat during the hot months, was assured, like the humidity, by the accessibility, in the Sahelian steppe, of thickly wooded wadis and interdunal depressions (Brouin; 1950; Gillet, 1965; Newby, 1974, 1988; Dragesco-Joffé, 1993). Dense shade trees such as *Maerua crassifolia* were particularly sought-after Gillet, 1965). *Commiphora africana*, various acacias (*Acacia senegal, A. seyal, A. arabica, A. nilotica, A. sieberiana, A. raddiana*) and several other Sahelian trees formed fairly dense woods in the preferred zones of occupation in Niger Brouin, 1950). In sparsely wooded regions shade can be provided by a clump of *Panicum turgidum* (Gillet, 1965). Access to salt deposits was likely indispensable during certain periods (Gillet, 1965).

For the Atlantic Sahara, information is more fragmentary. Morales Agacino (1950) observed the importance of *Aristida plumosa*. Valverde (1957) mentions *Andropogon laniger*. The distribution of the species noted by Morales Agacino (1950) corresponds to the Sahelo-Saharan zone of diffuse acacia woodland and *Aristida* steppes defined by Valverde (1957) and in which he notes the abundance of *Colocynthis vulgaris* and of the shrubby leguminous shrub *Crotalaria*, accompanied by a largely Sahelian cortège.

#### 2.1.2. Adaptation.

Prior to its extinction in the wild, the scimitar-horned oryx inhabited the arid grasslands surrounding the Sahara. Living in this environment explains the behaviour of the species that is characterised by crepuscular activity patterns, migratory tendencies and the ability to adopt flexible strategies for foraging and social organisation (Gilbert & Woodfine, 2004). The scimitar-horned oryx is also physiologically adapted to arid environments and may go for long periods without drinking (Dolan, 1966). While the pale pelage reflects sunlight, the black skin and tip of the tongue protects against sunburn (Mungall & Sheffield, 1994). These characteristics, along with the enlarged hooves, which enable the oryx to walk easily on sand, are adaptations to the arid environment that the animals inhabit.

#### 2.1.3. Social behaviour.

In the wild, and with the exception of old males, the Scimitar-Horned Oryx was rarely observed isolated. It lived in social groups usually not exceeding a dozen individuals (Le Berre, 1990). Concentrations of several hundreds individuals were not rare in the recent past, where temporary pastures appeared. Concentrations of several thousands individuals were even reported by many authors in Chad and Niger (Lhote, 1945; Brouin, 1950; Malbrant, 1952).

