

Executive Summary - Status Survey and Conservation Action Plan: Deer

Deer are a unique group of mammals recognized for their grace and beauty. As symbols of nature they play a vital ecological role in many ecosystems, and their economic importance in rural communities is significant. The development of practically every human frontier has relied upon large ungulates as a natural resource, and deer have figured prominently among those species. A number of deer are also prime examples of flagship species, whose continued survival sustains the complex interplay of flora and fauna.

Many species of deer are now under grave threat of extinction, and the situation will not change for the better without a concerted effort. This Action Plan is such an effort, and it has several important objectives. First, it is a reference on the status and distribution of threatened species of deer, and a guide to actions required for their conservation. Second, it outlines ways and means of securing updated information on the status of many poorly known populations using the best scientific methods. Third, it lists conservation priorities within each range country, and offers a feasible scheme for *in situ* involvement in a large number of range countries where the threats are greatest.

The Action Plan is a comprehensive reference that will be used as a general source of information by the lay public, as well as by range country biologists, university faculty and graduate students, state and federal employees of wildlife, protected area and environmental agencies, and the employees of non-governmental conservation organizations. It is also expected to serve as a reference to wildlife agencies for biodiversity planning, project formulation, and grant writing. The Deer Action Plan is the result of the cooperation of a large number of people from all over the world, most of whom are among the 74 individual Specialist Group members. Over 24 countries are represented within the membership of the IUCN/SSCDeer Specialist Group (DSG).

The *Introduction* sets the stage for the main body of the work with a description of the DSG, the modern context of deer conservation, the conservation philosophy and objectives of the Action Plan, and its methods. The short-term goals and primary challenges to its implementation are also discussed and a breakdown of conservation project training costs is presented.

The *List of Species and Subspecies* encompasses three families of deer and their relatives. The true deer of the family Cervidae are found throughout the New World, Europe, Asia and North Africa. They range in size from the diminutive pudu of South America and muntjacs of Asia, to the largest species, the moose. The musk deer of the family Moschidae are found in the high and cold regions of Eurasia. Of moderate size, they lack antlers but are equipped with large dagger-like canine teeth. The musk pod, a specialized scent-producing organ on the belly of males, produces a highly valued musk which is intensively sought as fixative for perfume and for its alleged medicinal properties. The mouse deer and chevrotains are terrier-sized ungulates of the family Tragulidae. They are solitary denizens of tropical forests, and in place of antlers use enlarged canines as weapons.

The body of the Action Plan is divided into four geographic sections: North America (including Canada, the United States and Mexico as far as the isthmus of Tehuantepec); South and Middle America; Europe, the Middle East and Africa; and Asia. Each section

contains a synopsis which summarizes the current conservation situation and a list of threatened species by country. The *Species Accounts* contain detailed descriptions, data and discussions of all available information. Within each Species Account, status designations are given, based on the *IUCN Red List Categories* (1994). The *Distribution and Status in the Wild* includes a country-by-country listing of protected areas in which the species is known, which can be compared with a more general description of *Past Distribution and Status*. Where applicable, the *Status in Captivity* is included. *Ecology and Reproduction* section summarizes habitat and food preferences, average group size and dispersion patterns, movements, and reproduction, while *Uses* describes current patterns of subsistence and commercial exploitation. *Causes of Decline and Present Threats* discusses prevailing problems confronting the species, and *Field Studies* lists recent and current initiatives to investigate various aspects of ecology. *Conservation Action* gives the reader information on various activities in each country, and *Recommended Conservation Action* lists the Deer Specialist Group's recommendations on what is necessary to conserve the species. A comprehensive *Bibliography* provides an extremely useful reference of recent literature on deer conservation. The *Appendices* provide additional useful material for field workers and conservationists.

Funding is a major challenge to the implementation of the Action Plan, but the costs of conducting field work can be quite low, and working at the grass roots level has many rewards. The objective of *Phase One* of the Action Plan is to train developing country personnel specialists. Regional training workshops would give graduate students and field biologists the skills and standardized methodology to conduct population surveys and ecological studies of threatened deer populations. Participants would conduct short (up to three- month) but intensive surveys of threatened deer in critical areas. Based on the survey information, *Phase Two* would initiate investigations of those populations that are in critical need of ecological information for proper management. In other cases, environmental education projects will be initiated to understand the nature of "park-people conflicts" and to foster grass-roots support for conservation of specific species of deer in protected or other natural areas. This scheme is based on the time-tested dictum that effective remedies for declining deer populations will be secured only with the use of sound knowledge.