

**THE PHILIPPINE SPOTTED DEER, *CERVUS ALFREDI* SCLATER,  
CONSERVATION PROGRAM**

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**ABSTRACT.** The addition of *Cervus alfredi* Sclater to the taxonomic grouping of the Philippine cervids has spurred efforts to study and conserve this highly threatened species. These efforts led to the establishment of an international agreement between the Philippine government through DENR, and Mulhouse Zoo, France to maintain captive breeding facilities within and out of the country. At present, three deer facilities: two *in-situ* (Negros and Panay) and one *ex-situ* (Mulhouse Zoo, France) are operating under a captive breeding program managed by three Filipino and three foreign members.

**INTRODUCTION**

Until quite recently, the Philippine Spotted or Prince Alfred's deer, *Cervus alfredi* Sclater, remained extremely poorly known. Indeed, it was effectively lost as a recognized form by being classified as a regional variant of the widespread and diverse group of sambar deer, *C. unicolor*, which also included the Philippine rusa, *C. mariannus* Desmarest. However, in their recent review of the taxonomy of the Philippine deer, Grubb and Groves (1983) recognized *C. mariannus* and *C. alfredi* as separate species; the former having at least four subspecies endemic to the islands of Luzon, Mindoro, Mindanao, and associated smaller islands in the east Philippines, and the latter a highly distinct, monotypic form, endemic to the Visayan Islands, central Philippines.

The survival of both of these deer, and that of the third endemic species, the Calamian deer, *Cervus calamianensis*, which is found only on a few of the larger islands of the Calamian group, is threatened by profligate deforestation and, despite

full legal protection, intense hunting pressure. Thus, the Calamian deer is recognized both nationally and internationally as a seriously threatened form, and has been accorded "vulnerable status" on the International Red List of Threatened Animals (IUCN, 1992) since the late 1970's (Oliver and Villamore, in prep.). *C. mariannus* is not yet considered seriously threatened throughout its range, and is not included on the IUCN Red List. However, it is certain that at least one subspecies, *C. m. barandanus* Grubb and Groves, is at some risk over its restricted range in Mindoro, and the present status of some other forms, such as *C. m. nigricans* Grubb and Groves, from lowland Mindanao, needs to be investigated.

By comparison, the spotted deer is unquestionably highly threatened, because it has already been extirpated over most of its known former range on the larger islands of the Negros Faunal Region of the central Philippines, which comprises the larger, western section of the Visayas geopolitical region (Figure 1).

#### THE PRESENT STATUS OF *C. ALFREDI*

The extent of the decline of the Philippine spotted deer was not fully appreciated until 1985, when a three-month field status survey was conducted by Cox (1985, 1987a). This survey revealed that the species was already extinct over most of its former range, including all of Cebu, Bohol, Siquijor and Guimaras, and that it survived in only one small area of western Panay (namely: Mt. Baloy/Mt. Madja-as) and in a few scattered fragments of remaining forest on Negros. It is likely that the species is also extinct on Masbate, which has been almost completely deforested, though this area was not visited during the 1985 survey. Deer are also now extinct on Bohol, though it remains unclear whether *Cervus alfredi* or *C. marianus* formerly occurred there because this island actually forms part of the Mindanao Faunal Region, as defined by Heaney (1986) on the basis of the 120-m bathymetric line (Fig. 1). Reports of deer occurring on the larger, neighboring islands of Samar and Leyte were also assumed to refer to *C. alfredi*, rather than *C. marianus*, during the 1985 survey (Cox, 1985, 1987a), although these islands also form part of the Mindanao Faunal Region. Moreover, as *C. marianus* is known to occur on both of these islands, it now seems likely that *C. alfredi* is absent, at least as a native or pure-bred form. As a result, the species is believed to have been extirpated over at least 95% of its former range, and to survive only as a series of small, discrete and highly vulnerable populations on no more than two islands, Panay and Negros.

Commensurate with the findings and recommendations of the 1985 survey, the species was included for the first time on the Red List of Threatened Animals (IUCN, 1988), when it was accorded "endangered status", thereby denoting the probability of its extinction in the near future if the causal factors, habitat attrition and hunting pressure, continued to operate. In a recent worldwide review of conservation

priorities, the IUCN Deer Specialist Group (in litt.) concluded that *Cervus alfredi* was one of the most seriously threatened of all species of deer.

## PROTOCOL FOR THE CONSERVATION PROGRAM

In the interim, the findings of the 1985 field survey were presented to the relevant authority in the Philippines, the Protected Areas and Wildlife Bureau (PAWB) of the Department of Environment and Natural Resources (DENR). As a result, two priority recommendations for immediate conservation action were agreed upon. These were: 1) that a new national park be created to protect the sole remaining (and single largest) wild population of spotted deer in the Mt. Baloy/Mt. Madja-as area of west Panay; and 2) that a properly structured, international cooperative captive breeding programme be established. In order to execute and finance these projects, the first formal International Agreement for a species conservation programme in the Philippines was drafted and signed by DENR and the Mulhouse Zoo, France, in April 1987. Under the terms and conditions of this agreement (which was modified in May 1990 in accordance with the development of a new breeding-loan policy by DENR, the Philippine Wildlife Loan Agreement or PWLA, which now applies to all threatened species of wildlife legally exported from the Philippines), it was recognized that the DENR had insufficient resources for the implementation of the proposed conservation strategy and that much of the necessary funding would have to be obtained from outside agencies. To this end, the West Berlin Zoological Society provided funding for a survey and development of a new management plan for the proposed new national park on Panay. This project, which was conducted over a four-month period in 1986/1987 by a team of Filipino and foreign scientists, resulted in plans for the development of a 40,000 hectare area of forest as the new Panay Mountains National Park (Cox, 1987b). Further work on this proposal is currently being undertaken by the relevant regional authorities of DENR (C. Magno, pers. comm.), but it is hoped that the new Park will be established by Presidential Decree and officially gazetted in the near future (W. Dee, pers. comm.).

In the interim, efforts were being made to raise the necessary funds for the development of the captive breeding programme. Under the terms of the Memorandum of Agreement (MOA) with the Mulhouse Zoo, it was proposed that this include the establishment of both local and international breeding stocks under the aegis of similar loan agreements between all participating institutions and the DENR. All of the animals acquired for this program (the "founders") would therefore be "loaned" to the project by the Government of the Philippines and managed cooperatively as a basis for the establishment of a "World Herd". The title of all ensuing captive-bred progeny would also remain with the Government and People of the Philippines under the terms of this MOA, thereby enabling the future management

the establishment of the local breeding centers is that these may also be used to accommodate and accumulate any additional specimens of Negros or Panay origin as may become available in the future by donation, purchase or confiscation. Any such animals will be added to the "World Herd" thereby enabling the number of founder individuals to be increased at intervals. As previously mentioned, a total of seven individuals, comprising two (both males) from Panay and five (two males, three females) from Negros have been acquired by the project following the export of the Mulhouse animals, all but one of which were donated by their owners. In addition, a total of eight (five males, three females) births have been recorded (two at Bitu Farm, two at Silliman and four in Mulhouse) to date under the aegis of this program, all but one of which (a male at Bitu Farm), have been reared successfully.

As soon as is practicable, it is intended to establish a second "Spotted Deer Breeding and Rescue Center" in Negros Occidental to extend the breeding program by the distribution of breeding stocks of least-related, captive-bred individuals to other reputable breeding centers, both in the Philippines and elsewhere. All such extensions would be made under breeding loan agreements, and the title of those animals would remain with the Government of the Philippines. Whenever possible, the Spotted Deer Conservation Committee will also negotiate the donation of funds from the recipient institutions for specific, related conservation projects in the Visayan region (which should eventually include *Cervus alfredi* reintroduction projects); thereby involving those institutions in the local, as well as the international, conservation effort.

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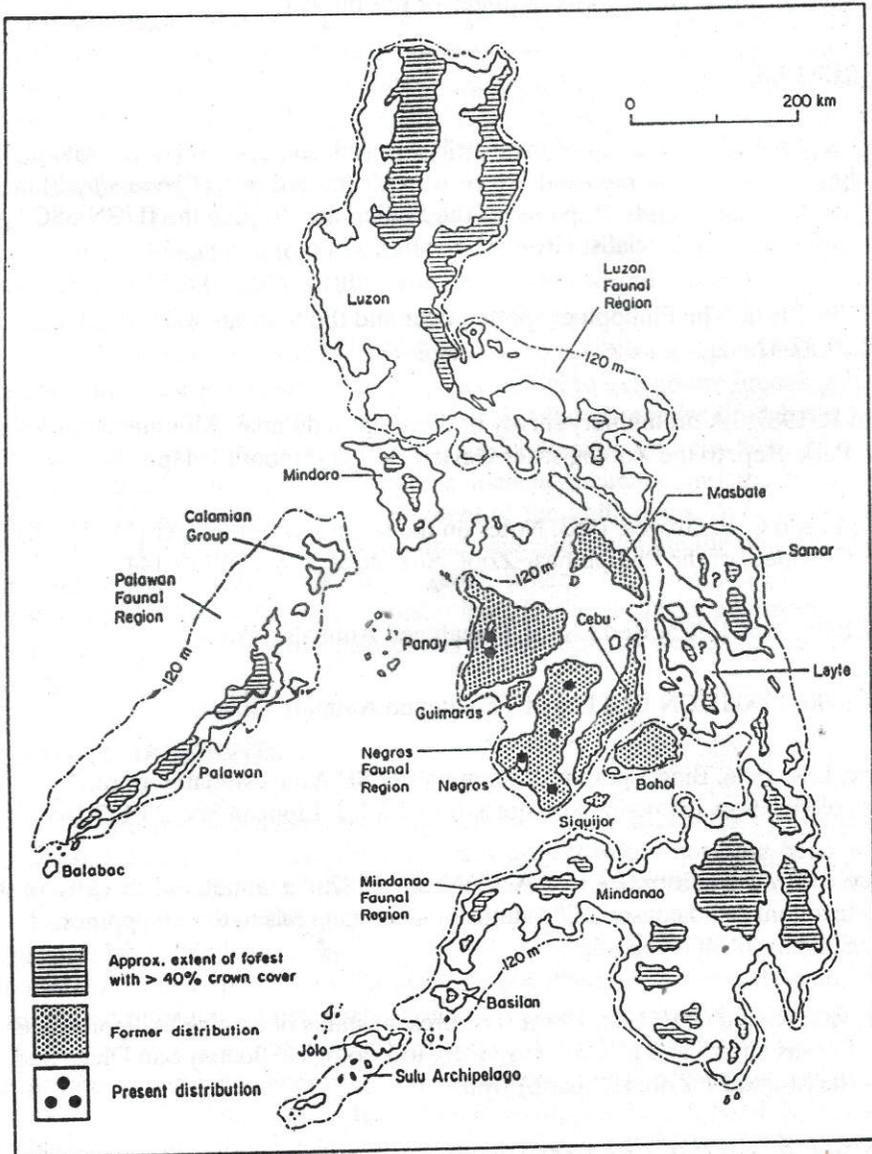


Figure 1. Approximate former and present distribution of the Philippine Spotted Deer, *Cervus alfredi*. Forest cover data is modified after Revilla (1986), and the division of the archipelago into separate faunal regions, as indicated by the 120m bathymetric line, follows Heaney (1986). See text for further explanation.