

Establishment of Wildlife Museum

**Final Report of the project: KFRI 505/2006,
"Establishment of Wildlife Museum"**

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ABSTRACT

A Wildlife Museum was established in the Wildlife Department of Kerala Forest Research Institute for displaying the rare specimens of wildlife species which were collected as part of the ongoing research projects.

INTRODUCTION

Since 1978, Wildlife Department of KFRI has been collecting biological specimens of selected group of animals as part of different studies. The specimens were mostly stored as wet specimens preserved in formaldehyde. Some recently collected specimens are preserved in alcohol also. In order to display the above collected specimens as per various taxonomic groups this project entitled "Establishment of Wildlife Museum" was undertaken to make the required infrastructure for storing the specimens.

Background

In response to the need for establishing a Wildlife Museum at KFRI, the Director, deputed two of the Investigators and the KFRI Engineer to visit National Museum of Natural History at New Delhi and Zoological survey of India, Kolkata to study in detail the various exhibits and displays of the above museums and to prepare a master-plan for establishing a Wildlife Museum in KFRI.

Visit to National Museum of Natural History

Visits were made to the National Museum of Natural History, FICCI Building, Barakhamba Road, New Delhi - 110 001 on 22nd August 2006. Dr. D. P. Singh, Scientist D holding the charge of Director welcomed us and described the history and functions of the National Museum of Natural History. After that, we visited all the technical sections and various displays in the Museum. Dr. P. K. Ray the Regional Director of the NMNH at Bhubaneswar was also present in the Museum. We were provided with

leaflets on the newly commissioned elephant skeleton at Bhuvanewar Regional Centre of the NMNH. He claimed it as the only elephant skeleton suspended from a roof in India. We could visit the technical sections of the NMNH namely the Taxidermy and Audio Visual section and various displays in the museum termed "Cell", "Nature" and "Forest". Photographs of important displays were taken and notes and measurements of the displays were recorded. Display panoramas like tropical rainforest, moist deciduous forest, wetlands, and dry forests were very attractive. The Biodiversity Park near the Yamuna River was a coordinated work of the Delhi University and Delhi Development Authority. Mr. Gogate described the history and functions of the Park and showed us the various programmes and attractive displays of the Biodiversity Park and we visited their display, which are quite impressive.

Visit to Indian Museum of Zoological Survey of India

On 23rd August 2006, we visited the Zoological Survey of India, Museum at New Alipore, Kolkata. Dr. Mukhopadhyay, who was coordinating our visit made arrangements to visit various facilities in the ZSI. First we visited the section of birds where dried skins of birds were stored. Dr. Maheswaran, Scientist described the details of this section. After that we visited the mammal section where, Dr. J. K. De described the procedure and storage of mammal skins. In this section we could visit the osteology section also, where skeletons of the mammals, horns and antlers were stored. Details on the method of display and preservation was recorded.

On 24th August 2006 we visited the Zoological Survey of India in the Indian Museum at Park Street. Dr. (Mrs.) Reena Chakravarthy was in Charge of our visit and she took us to the ZSI displays in the Indian Museum and explained the display in detail. Here we visited ecological and old taxonomical displays. After that, Dr. Murthy described about the reptile collections in the complex. Later we were taken to the Amphibian

collections, by Mr. Anathayya and coral collection by Dr. C. H. Sathyanarayana.

After the lunch we visited the Science City in Kolkata. Dr. Gupta who was in charge of the butterfly park described about the functioning of the butterfly Park but the butterfly park was not kept properly and the number of butterflies as very low.

Lessons from the visit

Ecological Galleries

Panels arranged according to ecological themes i.e. habitat (tropical evergreen forest, moist deciduous forest, dry deciduous forest, shola forests, grasslands, wetlands and mangroves) is desirable. Panels depicting representative animal species of each habitat, migratory birds of Kerala, endemic mammals of the Western Ghats, endemic birds of the Western Ghats are suggested. State animal and State bird should be depicted in a prominent panel. In these panels, we can use a choice of original specimens, models, photographs, drawings, Translides or wet specimens were to be done. Trees and plants artificial and background need to be painted so as to show the depth.

The space below the height of waistline of panels had to be covered for storing the dry skins of mammals and birds by providing shelves. Wet specimens of reptiles, fishes and amphibians could be kept in few panels separately also. Display racks for displaying osteological collections like skull of animals, deer horn, dentine and bones need to be arranged.

All the panels or few of them were to be provided with audio or video displays. Sound and calls of birds and animals need to be heard when a while operating the switches. Embedded chips which has long life are to be used for this.

Some important wet specimens should be transferred to ethyl alcohol (spirit) for enhancing the life of specimens. The type specimens or rare specimens may be considered for this. Others should be kept in formalin only.

All the display panels could be designed in computer and proper alterations have to be made and approved before executing. Table 1 gives the chronological events in the execution of establishment of the wildlife museum.

Table 1. Details of works executed during the establishment of the museum

Date	Brief particulars
18-7-2007	Inviting expression of interest through advertisement in Mathrubumi Daily. Only one response was received.
21-8-2007	Wildlife Museum Committee (WMC) was formed with Dr. K.C.Chacko as Chairman, and Dr. C. Renuka, Dr. E.A. Jayson, Mr. P.P. Sunny, Mr. U.Y.John as members and Dr. K.K. Ramachandran as Convenor.
4-9-2007	1 st meeting of WMC. Decided to contact Forest Industries (Travancore) Limited, Aluva for doing the interiors of Wildlife Museum.
5-9-2007	Officials from Forest Industries (Travancore) Ltd, Aluva visited KFRI
17-9-2007	Forest Industries (Travancore) Ltd, Aluva gave their quotation
20-10-2007	2 nd meeting of wildlife museum committee
23-10-2007	3 rd meeting of wildlife museum committee. Decided that we will do the furnishing of wildlife museum in a phased manner.
26-11-2007	4 th meeting of wildlife museum committee
10-12-2007	5 th meeting of wildlife museum committee
30-1-2008	6 th Meeting of wildlife museum committee. It was attended by Dr.S.S.Shanavas, MD, FIT and Sri.P.Krishnan, Finance Officer, FIT and Sri. Balan from FIT. Director, KFRI & Registrar, KFRI were the invitees. Wildlife museum committee gave recommendations to the Director that KFRI may award the proposed interior work of Wildlife Museum to Forest Industries (Travancore) Ltd. Aluva.

26-3-2008	KFRI signed an agreement with FIT for doing the interiors of Wildlife Museum with Teak wood.
May 2009	120 Museum jars were fabricated with the Magnum Glass works, Aroor.
9-6-2009	Forest Industries Travancore finished the interiors of the Wildlife Museum with Teakwood according to the specifications.
Work to be done	The specimens have to be suitably displayed and attractive panel on endemic animals of the Western Ghats to be prepared..

Several people were contacted for doing the interiors with proper displays.

Wildlife Museum displays at KFRI

We have catalogued more than 1000 wet specimens belonging to various groups such as mammals, birds, reptiles, amphibians, fishes, invertebrates. About 730 specimens had been collected during the old research projects. We have catalogued 140 specimens collected as part of the Biodiversity studies on the *Myristica* swamp forests of Kerala. We have also collected and preserved 116 specimens fishes and invertebrates from the Mangrove areas Kannur district.

Wildlife Museum is a repository of reference material which is useful for knowing the identity of the animals and the taxonomic status of the species and can also be used to documenting distribution of the species. Due to lack of storage space and maintenance many of the precious specimens previously collected were damaged and lacked identification characters such as colour, size, etc. Whenever specimens are collected are preserved as wet specimens in either formalin or alcohol. But the specimen loses its colour as time goes on. In order to get over this problem and to get the idea of the natural colour of the specimens it is necessary to get the specimens colour photographed, so that while examining the specimen at later time one can know the original colour pattern of the specimen.

In this regard it is necessary to have some good digital photographs of the specimens at different angles before the colour of the specimens is lost. This will finally result in having a digital library of the specimens collected, and will be useful for making training materials, in the years to come.

Though there are several specimens of the rare and endangered species housed in the wildlife museum, there is need for recouping it with sufficient specimens of common ones to exhibit the array of biodiversity within the related species. There is urgent need for strengthening the wildlife museum with all the vertebrate specimens of the Kerala part of the Western Ghats.

We can definitely make the wildlife museum hall more attractive with good panels, giving information on Western Ghat endemics, brief write up on different vertebrate groups etc.

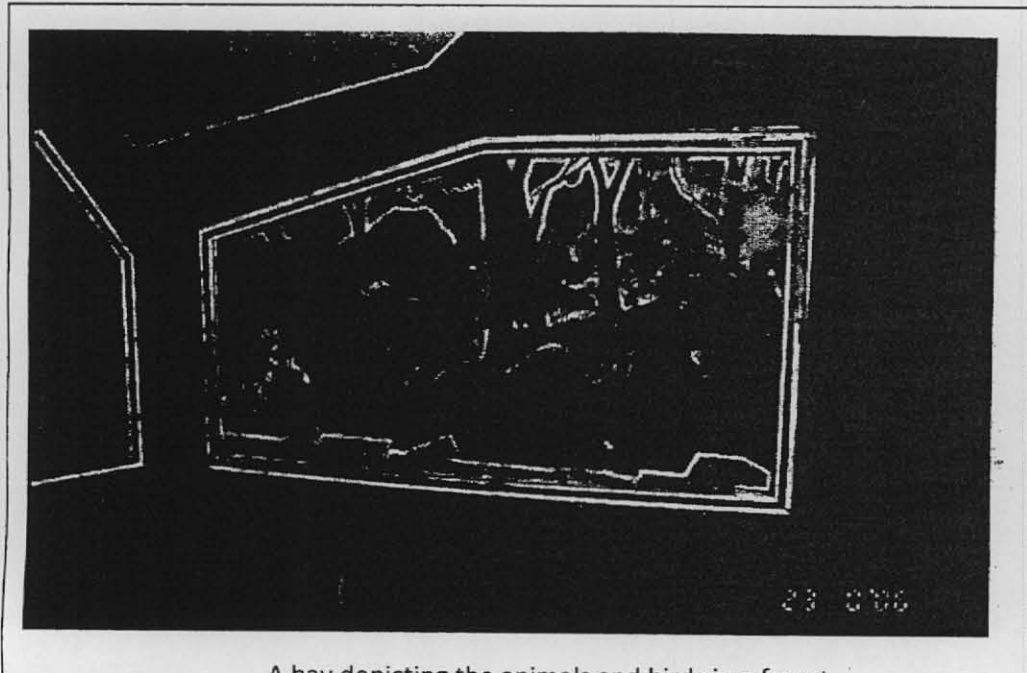
ACKNOWLEDGEMENT

We thank Dr. J. K. Sharma Dr. R. Ganaharan and Dr. K.V. Sankaran former Directors of Kerala Forest Research Institute for their support and encouragement. We are grateful to Project Staff Dr. Joyce Jose for making a draft copy of the drawing of the Wildlife Museum displays to be made in the available hall of the Wildlife Department.

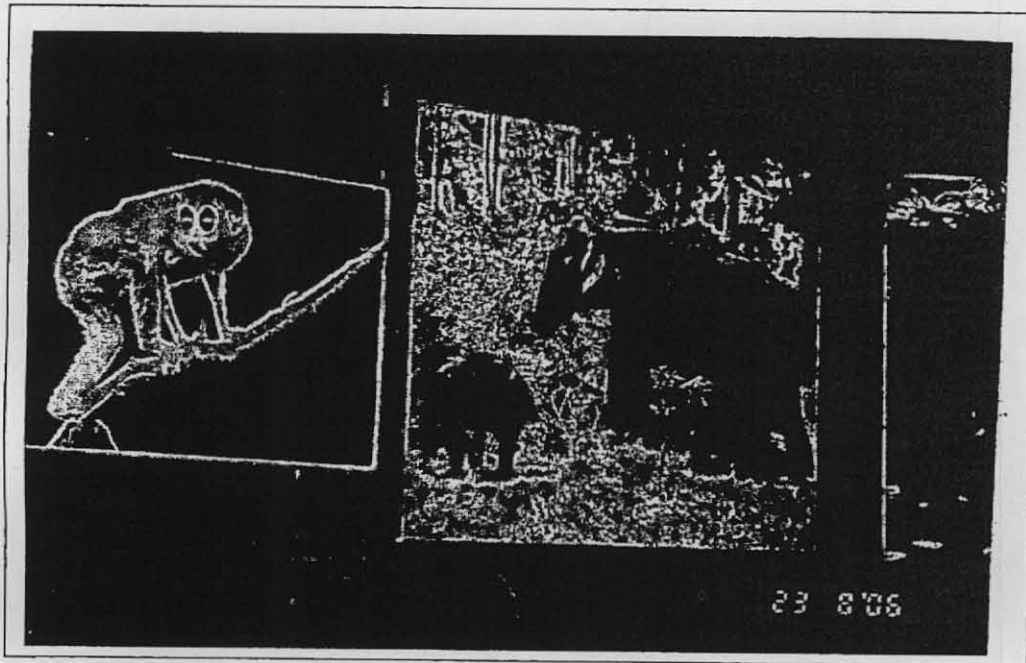
Thanks are due to Dr. K.C.Chacko, Chairman, Wildlife Museum Committee (WMC) who was instrumental in suggesting the use of teakwood for museum cup boards. Thanks are also due to members of the Wildlife Museum Committee Dr. C. Renuka, Mr. U.Y.John, and Mr. PP Sunny who contributed a lot as members of the WMC. We dedicate our respect to the departed soul of Mr P. Padmanabhan, investigator in the project and remember his contribution in salvaging the specimens which were dumped in a building in the campus.

Finally, we thank the three reviewers, Dr M.P.Sujatha, Dr E.M.Muralidharan and Dr K. Mohanadas who had gone through the draft report and suggested modifications.

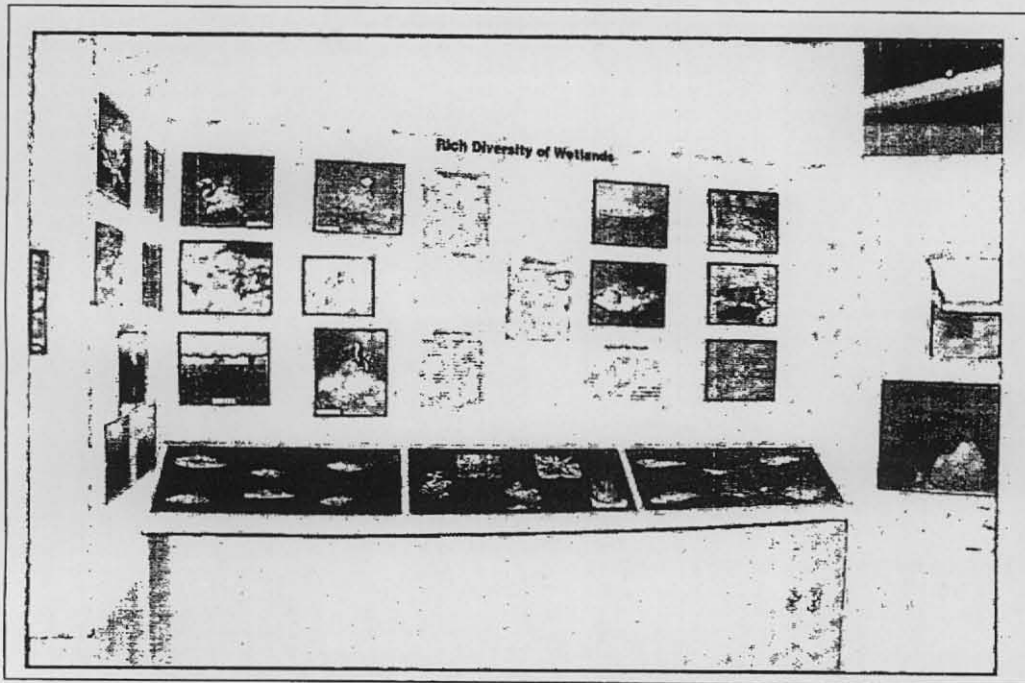
CERTAIN VIEWS OF THE DISPLAYS IN VARIOUS MUSEUMS



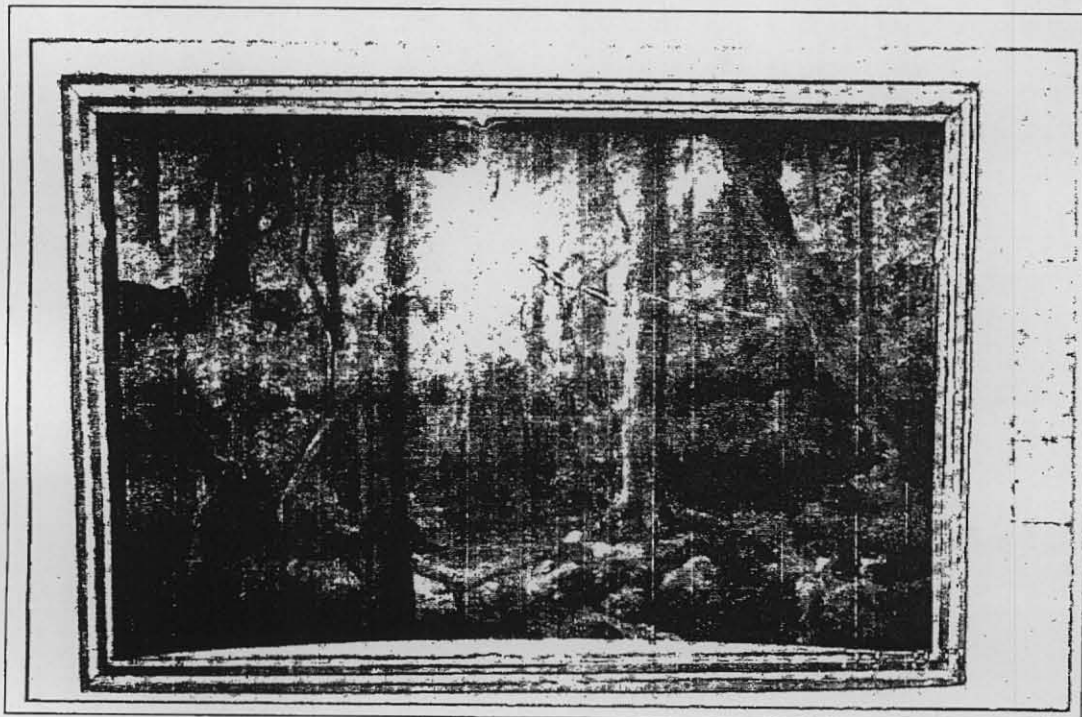
A bay depicting the animals and birds in a forest



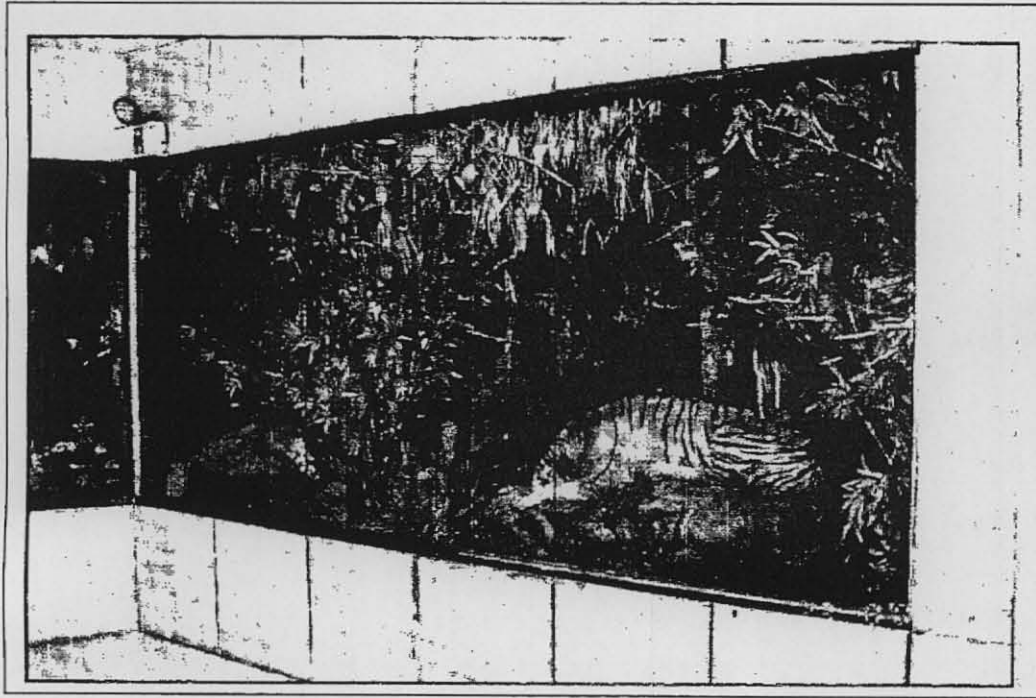
Another view depicting animals in forest in NMNH



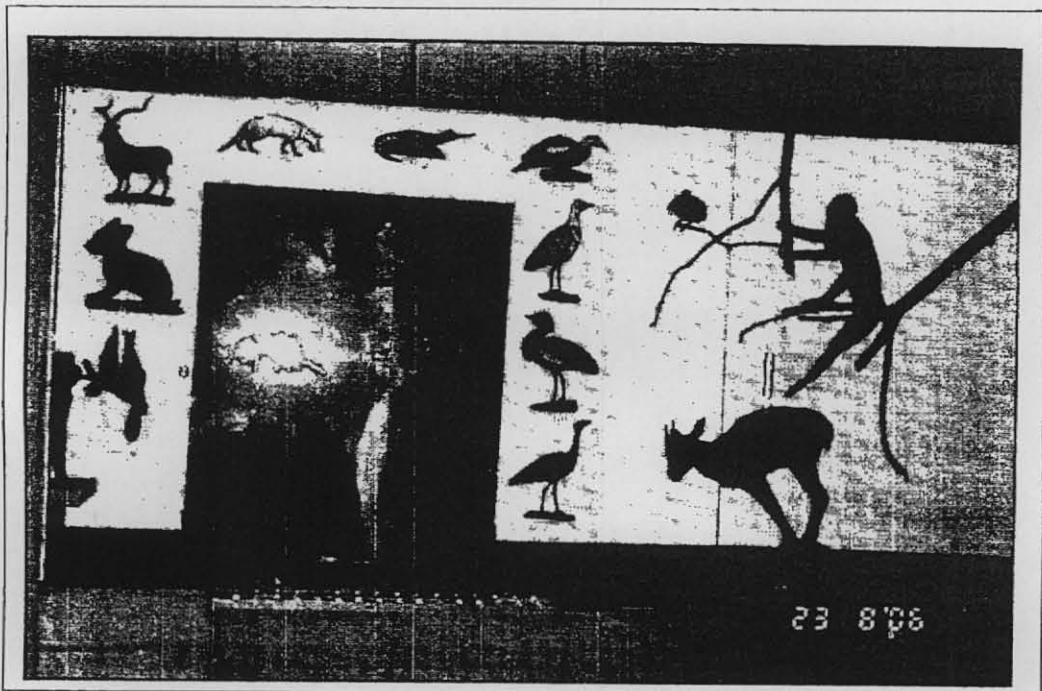
A bay in NMNH showing the rich biodiversity of Wetlands



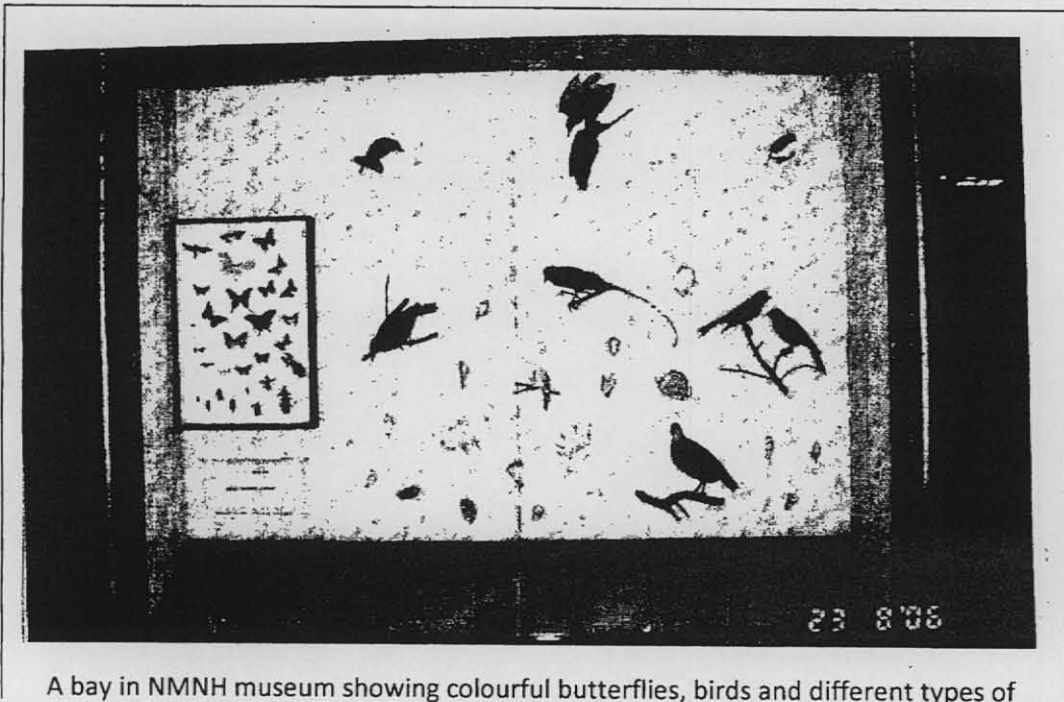
A painting depicting panorama of evergreen forest



A bay depicting a tiger habitat with a tiger model



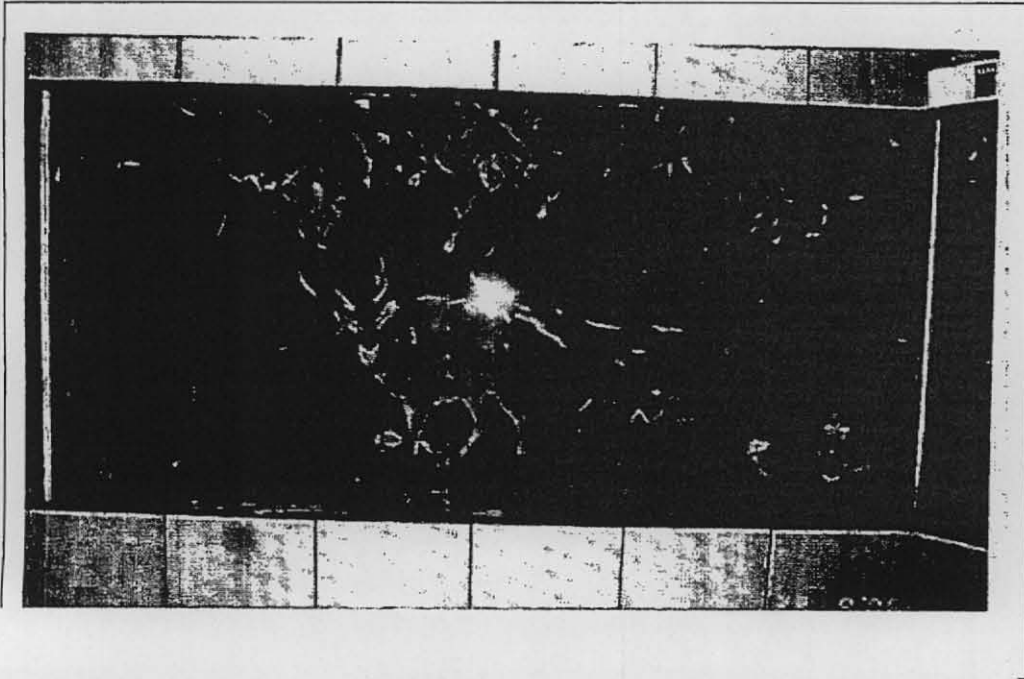
A interactive display to understand the endangered animals and birds using visitor friendly keys of a panel



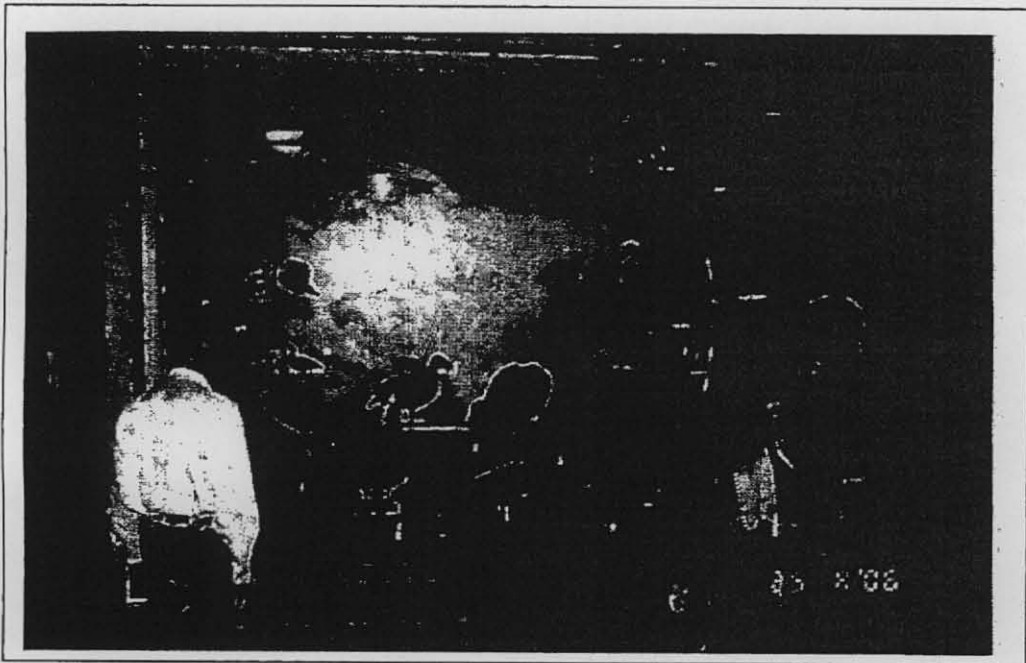
A bay in NMNH museum showing colourful butterflies, birds and different types of molluscan shells



A display in NMNH showing a food chain in a marine ecosystem.



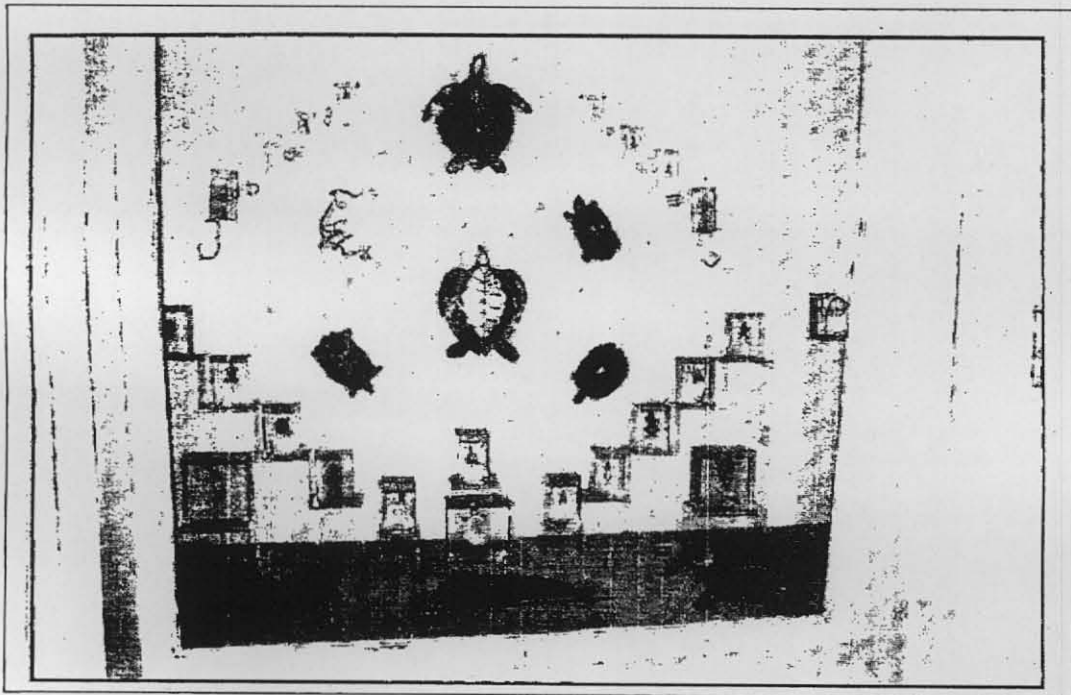
A model in NMNH depicting a Moist Deciduous Forest with spotted deer and sambar and associated birds of the forest



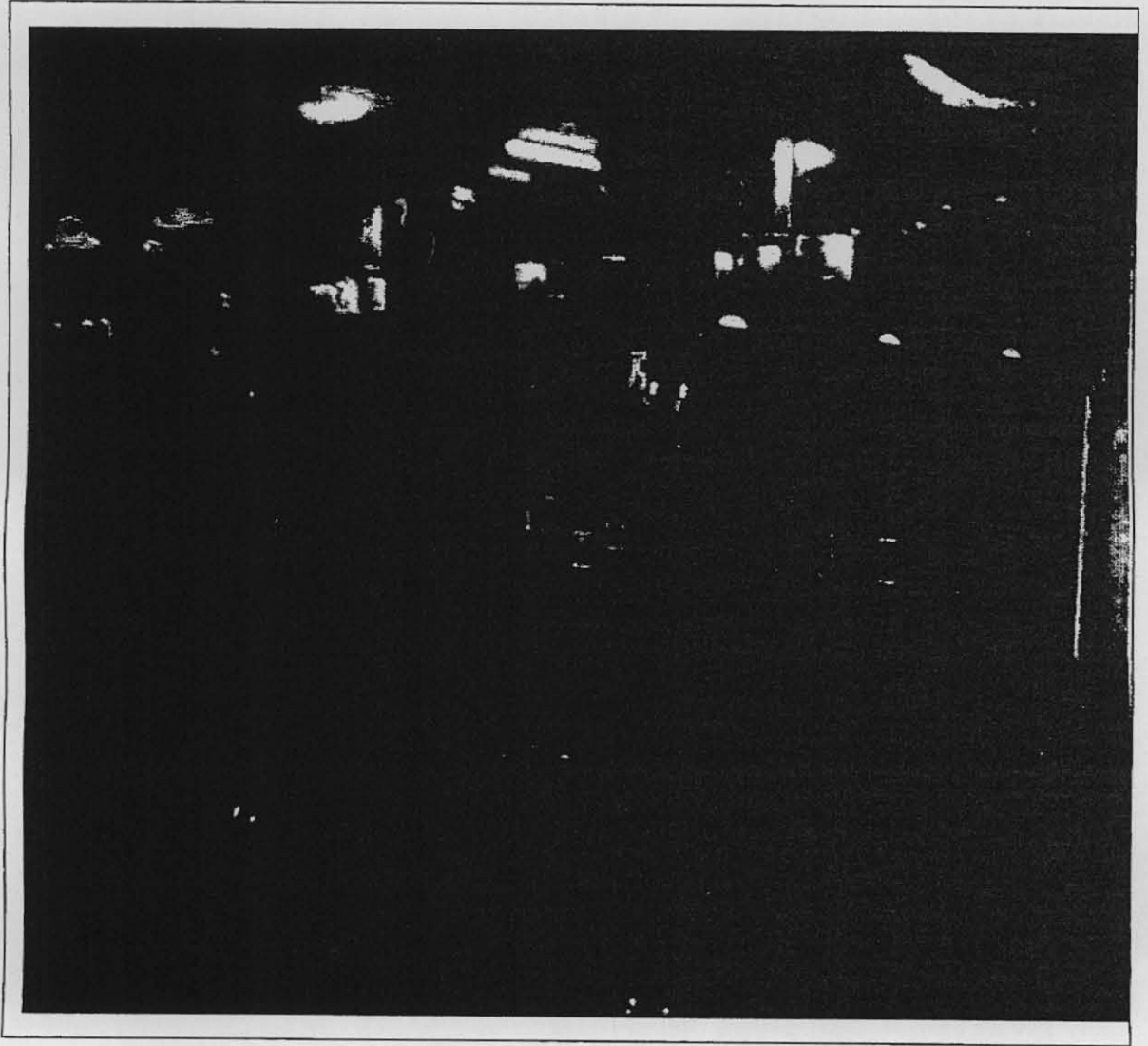
A display gallery in Indian Museum Calcutta, displaying migratory birds arriving in the Indian sub continent.



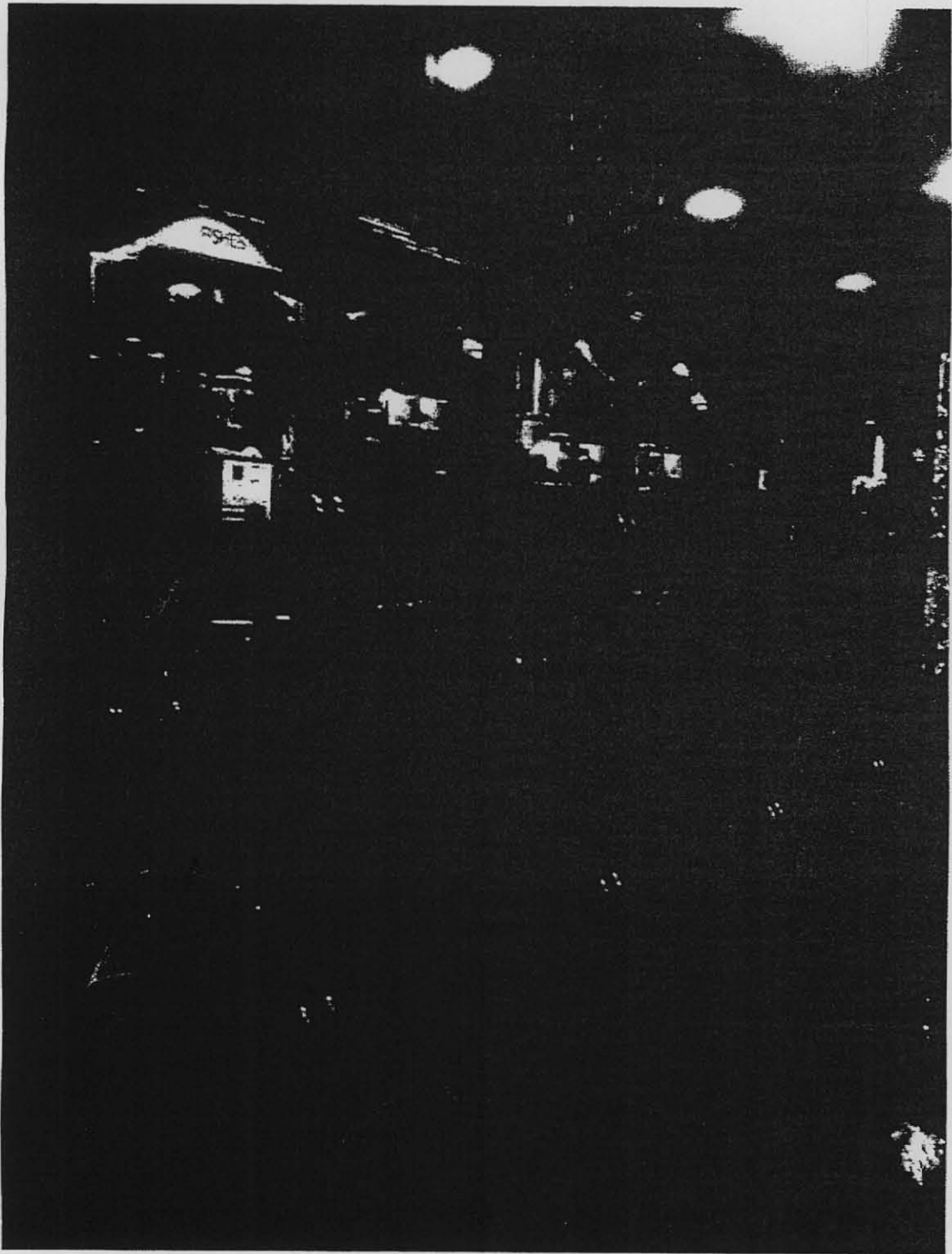
A display gallery in the Indian Museum Calcutta, displaying snakes and lizards. The wet collections are maintained in spirit and models are stuffed animals



A display gallery in the Indian Museum Calcutta, displaying turtles and amphibians. The wet collections are maintained in spirit and shells are of cured animals



Display of reptiles in KFRI Wildlife Museum



Display of fishes in KFRl Wildlife Museum