Chile National Zoo
Red Panda Exhibit

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http://www.zoolex.org/zoolexcgi/view.py?id=1621

LOCATION
Pío Nono 289, Santiago, Chile
Phone: 56-2-2730 1424
URL: http://www.parquemet.cl/zoologico-nacional/

KEY WORDS
bamboo forest, conservation, habitat loss, immersion

DESCRIPTION
The exhibit was conceived to present an endangered species in its natural habitat with the drama of habitat loss and the conservation plans for this species.

The goal of the design is an immersive experience for the visitors. A path meanders in a bamboo forest, with natural rocks, juniperus and ferns. The interpretive graphics explain the habitat. The visitors finally reach a covered structure where the red pandas can be seen through large panels of glass. Special design details allow children to have better views and a fun experience. Among these are a bronze sculpture donated by the Chinese embassy and some wooden steps in front of the viewing areas.

SIZE
The complex is composed of three exhibits plus a service area with two dens. A. Main outdoor exhibit with an area of 55m². B. A secondary outdoor exhibit for temporary holding with an area of 10m². This enclosure can also be used for a golden pheasant. C. An indoor exhibit where temperature can be kept under 25°C during summer. D. Two dens out of the view of the visitors with temperature control.

ANIMALS

<table>
<thead>
<tr>
<th>Family</th>
<th>Species</th>
<th>Common Name</th>
<th>Capacity</th>
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<tbody>
<tr>
<td>Ailuridae</td>
<td>Ailurus fulgens</td>
<td>Red panda</td>
<td>1.2.2</td>
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</table>

COSTS
USD 71,000 including 12 % for design.

The National Zoo hired Gustavo Collados as a permanent consultant for 6 months to develop plans and to overlook construction.
The construction was done internally by the zoo, with its own materials existing in stock and its own workers. Additionally four external workers were hired for four months. Maintenance is done by zoo staff.

**OPENING DATE**
20 December 2014

**DESIGN**
Beginning: 1 May 2014
• Design: Gustavo Collados, Pangea Consultants, Santiago, Chile
• Construction Supervision: Gustavo Collados, Pangea Consultants, Santiago, Chile

**CONSTRUCTION**
Beginning: 15 August 2014
• Construction: Jaime García, leader of the zoo building team, Santiago, Chile

**PLANTS**
The plant collection was selected to replicate the animal's natural environment: several species of bamboo, juniperus and ferns.

The plant list specifies the Latin names of the plants used for this exhibit.

**FEATURES DEDICATED TO ANIMALS**
A total of three interconnected exhibits allow a flexible management. One of the exhibits is air-conditioned to keep the temperature below 25°C which is the maximum temperature recommended for these animals. (The temperature in Santiago can reach 37°C in summer).

The main outdoor exhibit provides a three dimensional space with perches and dead trees to provide climbing opportunities for this semi-arboreal species.

**FEATURES DEDICATED TO KEEPERS**
The configuration of the exhibits allows the keepers to circulate with reasonable ease between dead trees and rocks.

Keeper access to the exhibit is through the holding building in order to minimize the risk of animal escape. For major maintenance and the introduction of trunks and other big objects, there is a mesh panel that can be opened.

The holding building has two pens, a keeper’s corridor and a small kitchen with a sink. All gates can be operated from the keeper’s corridor.

<table>
<thead>
<tr>
<th>use</th>
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<th>outdoors accessible</th>
<th>total</th>
<th>total exhibit</th>
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<tr>
<td>animals</td>
<td>18</td>
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<td>55</td>
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<td>others</td>
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<td>total</td>
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</table>
FEATURES DEDICATED TO VISITORS
With an immersion experience in mind, a meandering path penetrates in a bamboo forest, with natural rocks, juniperus and ferns. The interpretive graphics talk about the habitat. The visitors enter a covered structure where the red pandas can be seen through large panels of glass. The low roof protects the visitors from sun and rain and the glass panels from reflections. The observation windows are in different angles to allow various perspectives and in order to avoid cross viewing between visitors on opposite sides of the exhibit - which can ruin the experience and stress the animals feeling surrounded by visitors. Between the windows is a wooden platform with steps that children can use to observe the animals.

INTERPRETATION
The landscape presents intrinsic information by its topography, vegetation and rocks. Large size interpretive graphics present the geographical range of the species, the habitat characteristics, other animal species that share the habitat, the natural history of the red panda, its threats and conservation programs.

A full-scale brass sculpture gives visitors a tactile opportunity. The sculpture is a donation of the Chinese embassy and was produced by a Chinese artist.

MANAGEMENT
The animals are part of a global management program. The animals are trained with positive reinforcement in order to facilitate medical care. During the day, the animals can choose to go outside. At night, they are locked in the indoor enclosures. Visitors can see them indoors during the summer.

The animals receive fresh bamboo daily that is delivered every second week. Additionally, they receive concentrated pellets (Mazuri/folivorous) and fruit. Food based behavioral enrichment is performed by the keepers.

CONSERVATION
The animals are part of the Global Species Management Plan (GSMP). The goals of construction were to minimize the impact on the terrain and the use of sustainable materials. One example is the selection of timber. Four large pillars of 30x30cm section and 4m length were used for the observation shelter. Originally, the idea was to get local oak for its durability. However, it turned out to be more sustainable to use sawn Oregon pine from plantations. This avoided felling old oaks which is regulated and would have been legal, but still is less sustainable.

LOCAL RESOURCES
Only local labor was used from design to construction. The materials are for the most part national, with the exception of the steel mesh that was produced in China and the air conditioning equipment.