

KOKORO NEWS

NO. 57 2001. 1

Spectacular experience! You can feel sign of presence of a giant creature 12m above your head!

The “Fukui Prefectural Dinosaur Museum” was opened in July 2000. The giant dinosaur robot “Omeisaurus” was installed in the museum as one of the main exhibits. Kokoro, which has released a lot of dinosaur robots so far, thinks that it is the culmination of its technologies and the honor based on the evaluation of its activities over the years. Kokoro flies ahead to the 21st century taking further steps.

The Fukui Prefectural Dinosaur Museum was established as the integration of prefecture-wide dinosaur business. It is a large-scale specialized dinosaur facility eyeing the whole world. A lot of Kokoro’s dinosaurs are playing active roles in this new base for dinosaur research in Japan.

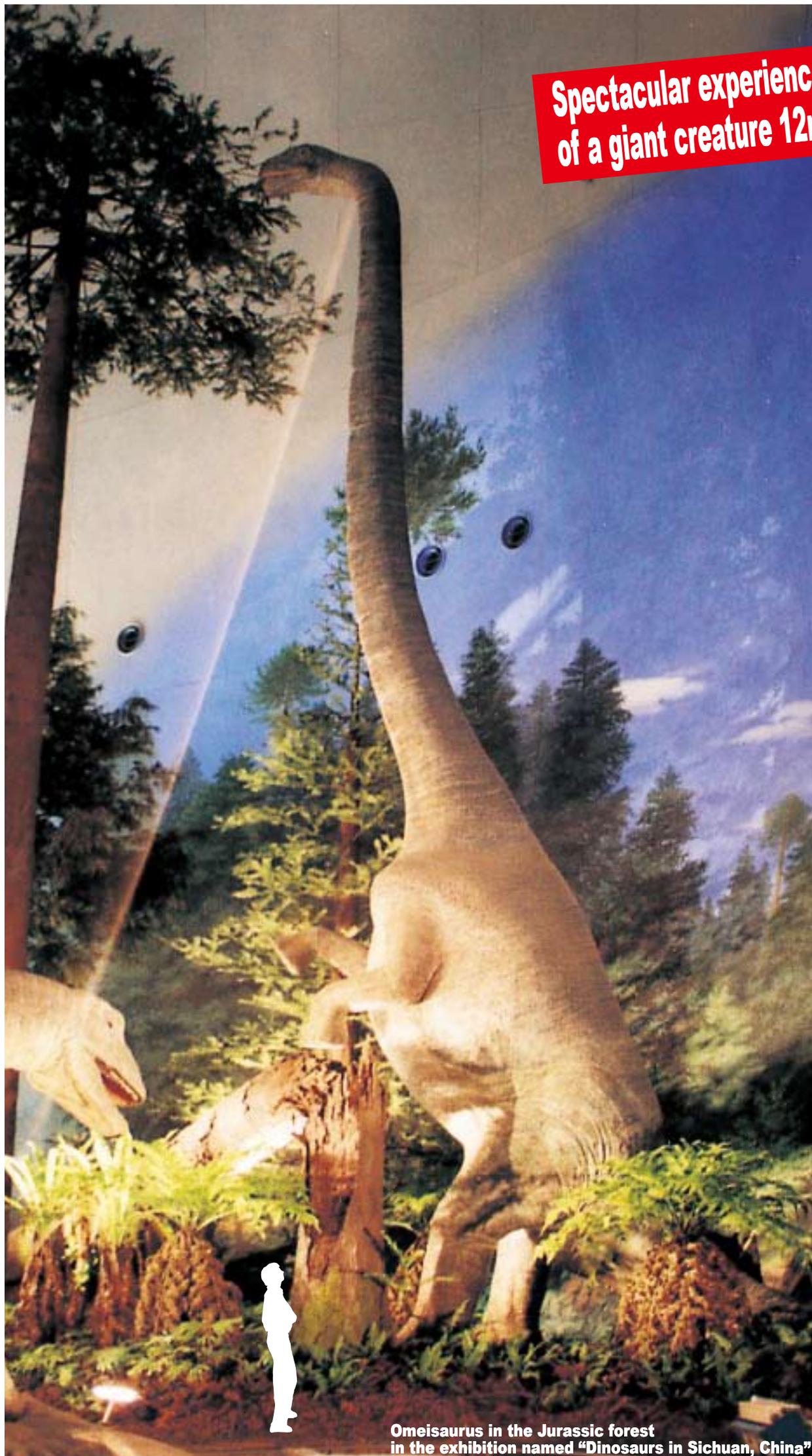
Dinosaurs have a special meaning for Kokoro because they triggered its “Doukoku” (animatronics) business development and they are our friends who have moved through the history together with us to tell us the necessity of change over time and the need to change.

As research advances, dinosaurs are enhancing their reality more and more with their biology and appearance changing in many ways. The way they evolve and become more precise is very similar to the way our robots progress. That’s why we have a special feeling for the combination of “dinosaur + robot”, identifying our history and milestones with it.

We created Omeisaurus in the last year of the 20th century as the culmination of our past technologies. Kokoro will keep on moving forward like the way Omeisaurus is stretching its long neck toward the 21st century.



“Fukui Prefectural Dinosaur Museum”



Omeisaurus in the Jurassic forest in the exhibition named “Dinosaurs in Sichuan, China”

Confidence of being “real” based on academic grounds Birth of a vast space of integration of realism and dynamism

Fukui Prefectural Dinosaur Museum

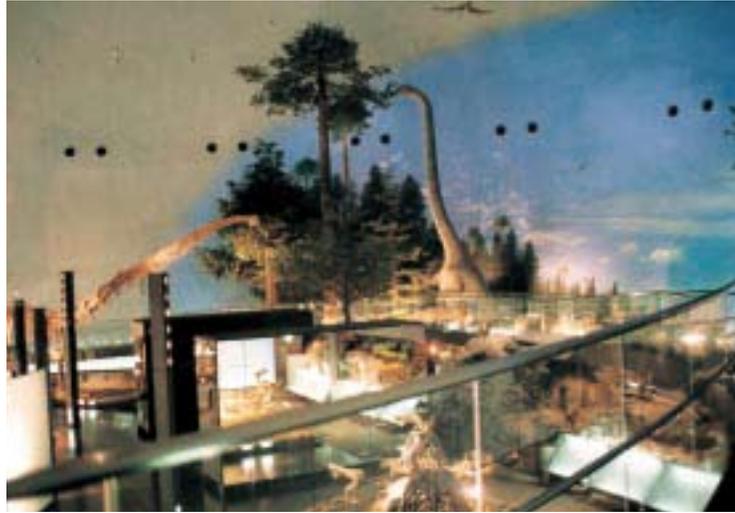
**Dinosaur robots playing active roles in the authoritative dinosaur museum
Kokoro’s animatronics have established a position as one of the exhibition
methods to give a surprise to and make an impression on visitors.**

Themed on looking back on the history of dinosaurs and life on earth and thinking about the road to the future, the Fukui Prefectural Dinosaur Museum exhibits in the egg-shaped modern silver hall designed by Kisho Kurokawa valuable ancient specimens including dinosaur fossils probably in the largest scale in Japan.

In “Dinosaur World”, the main exhibition area with a vast stairwell, various complete skeletons of dinosaurs are placed in good order and in the back of these skeletons the thin and long neck of Omeisaurus which is eating plants high in the ceiling attracts the visitors’ attention. It is the Jurassic forest.

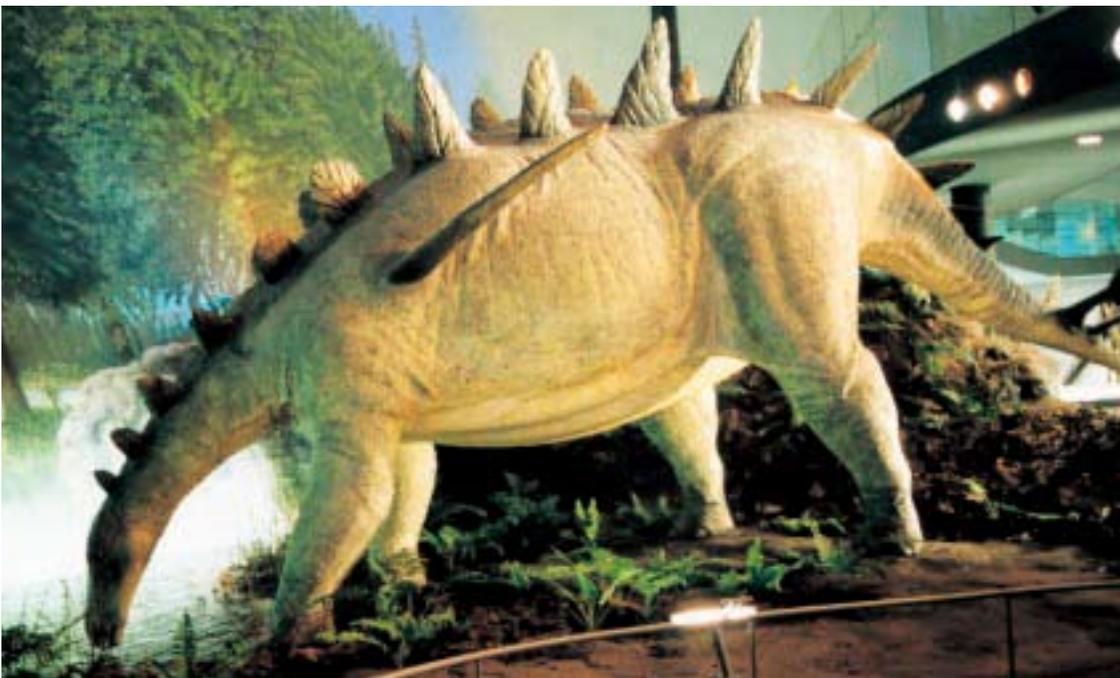
The area “Dinosaurs in Sichuan, China” is stretching there re-creating a lively scene of dinosaurs.

We tried to re-create lively breathing of dinosaurs by representing dramatic moments when they are taking dynamic postures so that visitors can experience, in the thoroughly-built backdrops of plants, etc., a rich ecosystem



of the Jurassic period which includes fierce Gasosaurus attacking the prey in a group, powerful Shunosaurus flicking away enemies with its tail with bumps, small Agilisaurus which moves lightly and so on.

Realistic appearance has a true persuasive power. We collected various data for the production of dinosaur robots and pursued the “real thing which cannot be seen at present” based on the latest theory under the elaborate supervision of dinosaur specialists including Dr. Takashi Hamada and Dr. Yoichi Azuma. We put all of our technologies into the work to satisfy high-quality requirements such as realistic appearance (e.g. accurate formative design



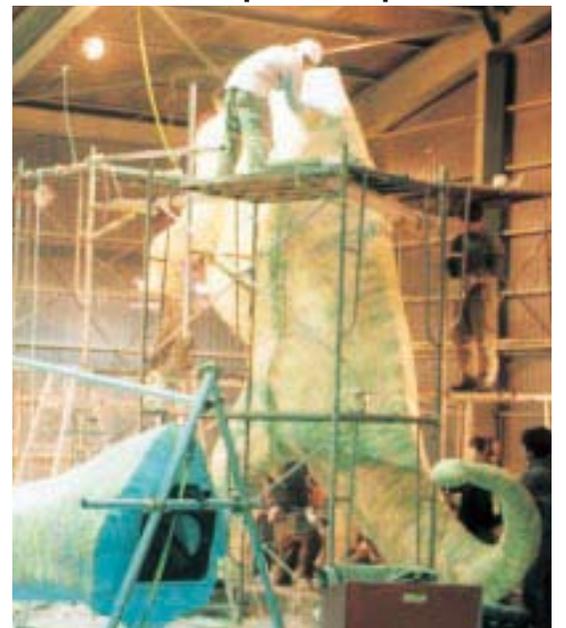
Tuojiangosaurus

based on fossils and creature smooth movements) and the large size (12m body height).

As for creatures like dinosaurs, we can get actual samples of them only in the form of fossils. In exhibiting such creatures, restoration of ecology by using robots makes a significant contribution as an exhibition method to tell, if only a little, in an understandable and impressive way the real image of them which had bodies and were moving.

Let’s stand in the space of “Dinosaurs in Sichuan, China” to experience the dinosaurs’ breathing, looking up at the towering giant body of Omeisaurus and turning around at the roaring voice coming close.

Omeisaurus in the process of production



For further information, please visit the website of The Fukui Prefectural Dinosaur Museum
<http://www.dinosaur.pref.fukui.jp/en/index.html>



Products under supervision

Making dream reality! Main characters in the attraction

Sanrio Puroland / Sanrio Character Boat Ride

**Fantastic world to satisfy even hard-core fans!
High-quality finished attraction - everyone can enjoy the dream world**

"Sanrio Puroland" in Tama City, Tokyo is an indoor theme park where you can see many Sanrio characters including Hello Kitty. Among many attractions there, "Sanrio Character Boat Ride" started operation in November 1999 as a new attraction in commemoration of the 10th anniversary of Puroland. Guests ride on the boat and go around the fantastic world where Sanrio characters live. At the end of the boat ride, they are welcomed by dressed up characters at a luxury ball in the castle. The ideals of Sanrio Puroland to entertain guests by its characters are concentrated in this attraction with many famous Sanrio characters getting together. Kokoro helped create a new world view to expand the character image in the form of 3D representation of characters without disappointing guests. Extremely delicate work was required for the production of the main characters in the fantastic world.

Molding which is true to original design and performance which does not break the character image are the established theories in character forming. If character design is damaged, even a little, it will be a "fake". Also, fans will be disappointed at performance which does not fit its original image.

Especially, to make 3D representations of or direct performance of famous and well-recognized characters whose 2D images preceded other elements, extreme care was required not to disappoint fans though it was creative work to further expand the world view of the characters.

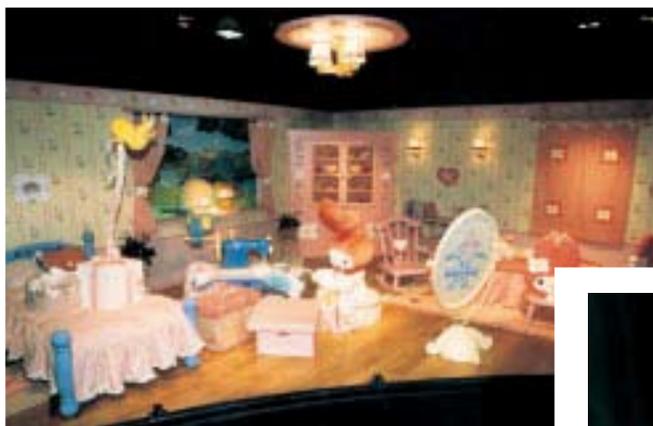
In producing Sanrio Character Boat Ride, we succeeded in creating a dense character world through thorough discussions to build design structure of each character zone which does not break the character image and to realize a ball in the unprecedentedly gorgeous castle. Also, in character forming, we made efforts to meet the needs of satisfactory delicate 3D representations in terms of material selection, molding method and costumes through detailed discussions with Sanrio designers.



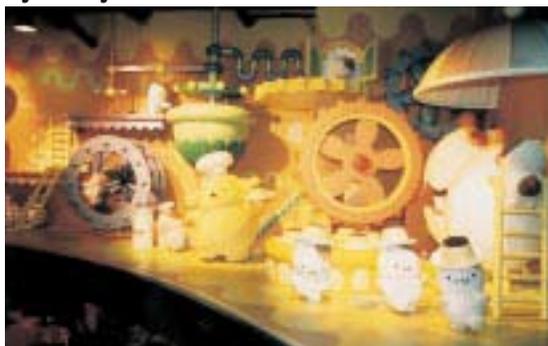
Gorgeous Kitty Castle



Upper: "Osaruno Monkichi" float
Lower: "Pochakko" riding on a propeller bicycle



My Melody's room



Pom Pom Prin's pudding factory

Harmonyland (in Oita Prefecture)

Sanrio Character Boat Ride also opened in "Harmonyland", a sister facility of Sanrio Puroland in Oita Prefecture, in March 2000 as a panorama attraction which can be enjoyed even by a "Sanrio beginner".



Sanrio Character Boat Ride in Harmonyland

For further information,
please visit the website of Sanrio
<http://www.sanrio.co.jp/english/index.html>

Importing overseas planning exhibitions to Japan

The imported planning exhibition by Kokoro had a fairly good start

**Becoming a very popular rental exhibition.
The interactive planning exhibition themed
on mathematics to study and play with!
“Let's try! Brain Puzzle Box”**



Kokoro has broadened networks with noted museums and authoritative organizations in the world including Natural History Museum in London through overseas development of planning exhibitions using its “Doukoku” animatronics as main axes. Recently, Kokoro introduced a unique overseas planning exhibition to Japan as part of the mutual exchange and it is gaining popularity.

In this “Puzzle Box” exhibition which encourages visitors to learn about mathematics with having fun by replacing an abstract theme of mathematics by experiments, all exhibits are interactive ones which visitors can directly touch and play with. It was originally a travelling exhibition named “Math Amazing” planned by Questacon - Australia's National Science and Technology Centre. It started travelling in Japan in the summer 2000 with backing from the Australian Embassy.

When we hear the word arithmetic or mathematics, what comes to our mind is the difficult image such as an equation with a lot of numbers. However, in the Puzzle Box exhibition, puzzle-like contents were made into many interesting and interactive exhibits including touch panel displays utilizing PC software and exhibits which require physical work such as building up blocks and throwing a ball, with emphasis put on participatory approach. Everyone can try the exhibits just for fun regardless of mathematics education level. The development in Japan started in the summer 2000 making a good start at “Fukuoka City Children's Science & Culture Center”. In the exhibition venue, a lot of young children who did not even know the word mathematics were absorbed in playing with the exhibits. The view reminded us anew of the significance of the exhibits which would not impose understanding but lead children to study with having fun.

In developing the Puzzle Box, Kokoro reflected domestic needs and made easy-to-use arrangements in it. The basic plan is composed of 25 exhibits and covers a smaller space of approx. 300m². It can also be developed in a larger space by adding options.

All exhibits can be set up easily as they are put in self-contained dressed cases. In addition, explanatory graphic panels with a lot of amusing illustrations are included.

Organizers need not newly prepare captions about how to play and explanations. Little work is needed on interior decoration. So the burden regarding preparations can be largely removed. We also provide teaching text for attendants in the venue so that they can guide and respond to visitors even if they are not mathematics experts.

Each exhibit is complete itself as a plaything and can be used as a single hands-on item in various scenes beyond a framework of a planning exhibition on mathematics.

We are considering wide-ranging development such as using it as a supplementary exhibit to explain a system of a product in showrooms or using it as a tool for some trial event which awards gifts to participants based on the results.

For any inquiry, please call us at: +81-3-3779-8506.



Mysterious rail



Mobius strip



Artificial gravity experiment



3D four-in-a-row



Newton's cradle



Arched bridge



Tower of Bramah



Target aiming game using plates



Linked two pairs of handcuffs



Pascal's triangle

Realistic dinosaur world coming to life in mixed media

WALKING WITH DINOSAURS BBC

“Amazing Dinosaur Kingdom: Photo Journal”
(Translated into Japanese)
Written by Stephen Cole
Amuse Books, Inc. 1428 yen (excluding tax)



The “Amazing Dinosaur Kingdom” (original title: “Walking with Dinosaurs”) exhibition gaining much popularity!

A wonderful TV program on dinosaurs was broadcasted in January 2000 as a special program celebrating the 40th anniversary of TV Asahi Corporation. The program named “Amazing Dinosaur Kingdom” (original title: Walking with Dinosaurs), perfect visualization of the Jurassic period with the latest CG technology and a prominent sense, was a great visual lyric poem created through a partnership among the British Broadcasting Corporation (BBC), Japan, the U.S. and France with the production cost of 1.2 billion yen. In the U.K., it captured an audience rating of 30 percent and two sequels of “Allosaurus” and “Walking with Prehistoric Beasts” were created later.

It was broadcasted as a digest version when broadcasted on TV in Japan but all the contents are on sale in the form of six volumes of 30-minute videos. Kokoro helped the promotional event of the work by building a small Allosaurus named “Dwarf Allo” from the Lower Cretaceous period which appears in the video using the latest air servo system. The dinosaur robot built by Kokoro looked exactly like the CG Allosaurus in appearance and gesture, so it looked as if it had jumped out of the realistic CG images. In this way, Kokoro contributed a lot to the effective promotion of the work.

The Amazing Dinosaur Kingdom exhibition, in which multiple media are integrated, has been developing widely going beyond just a promotional event. Some of such examples are introduced here.

The first example is the “Large Dinosaur Exhibition”, a powerful dinosaur exhibition with images full of high realistic sensation and a dinosaur robot which jumped out of the screen. The world view of dinosaurs by realistic images with a story line and the presence and punch of a dinosaur robot as a 3D figure are integrated in the virtual dinosaur exhibition. Visitors can enjoy the virtual Jurassic period and the virtual Cretaceous period in the exhibition.



Dinosaur robot : Allosaurus



“Amazing Dinosaur Kingdom” in six volumes
(in Japanese) 2900 yen for each (excluding tax)
Selling company: Amuse Pictures, Inc.
Distributor: Amuse Soft Entertainment, Inc

Pictures©BBC Worldwide Ltd.1999

The next example is the “Making of the Dinosaur Kingdom” exhibition which shows the behind-the-scenes of the realistic CG images and the forefront of digital technology. In this SFX exhibition, visitors can see the production process of and techniques used for the Amazing Dinosaur Kingdom CG images, a making video and still photos of the latest dinosaur robot and various models and equipment. There are also other exhibitions including the BBC exhibition to introduce excellent images and activities of the BBC and the U.K. exhibition. Like this, the Amazing Dinosaur Kingdom has been developing in various categories and media going beyond a framework of existing dinosaur exhibitions.

The Amazing Dinosaur Kingdom was rebroadcasted by TV Asahi in January 2001 and also broadcasted in a series on History Channel and BS Asahi.

Overseas activities

Novel science exhibition themed on legendary monsters

Myths and Monsters Exhibition

Rental tours well-received abroad

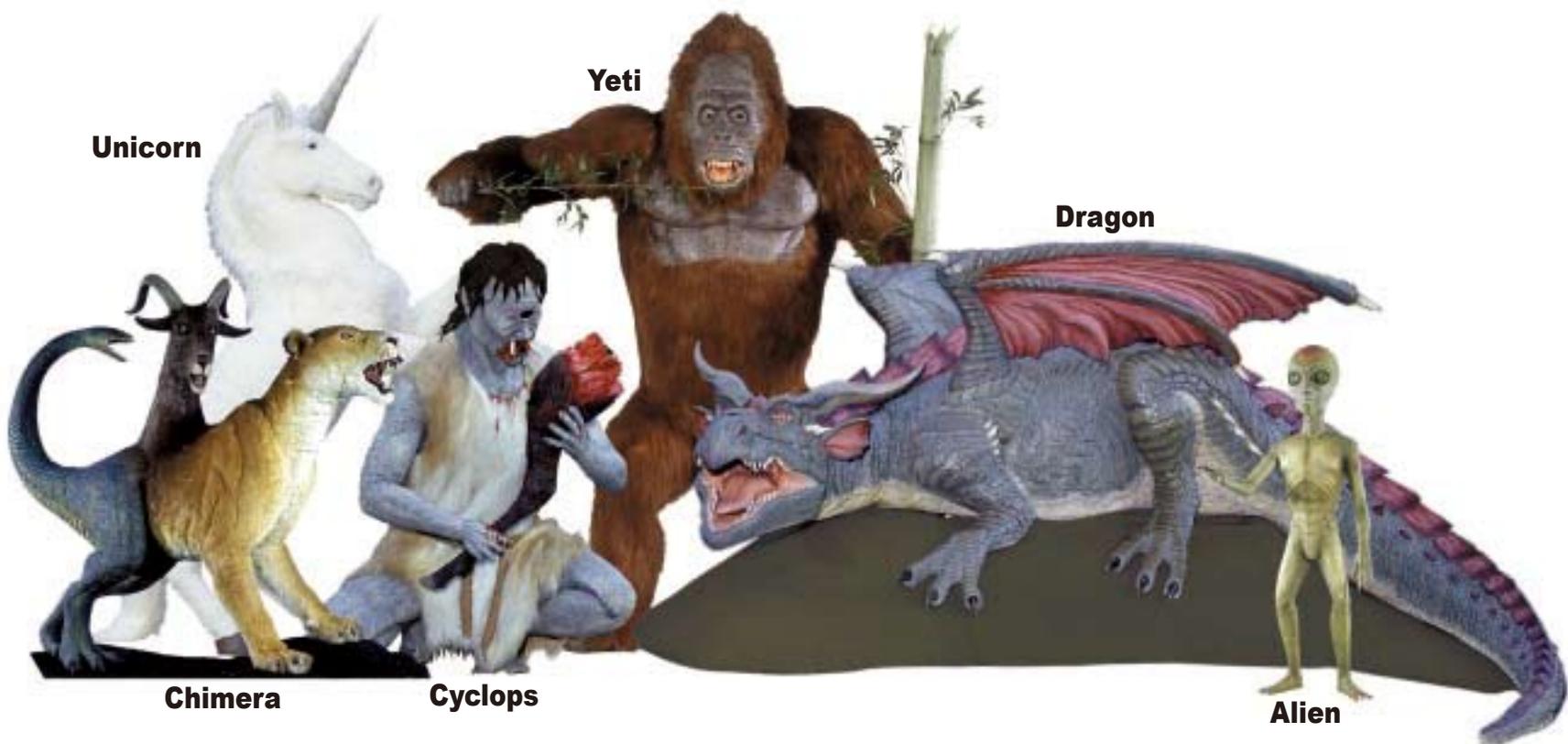
As for monsters which have been considered as non-scientific presence because of their strange appearance and legendary creatures like Dragon which have already become well-established presence in all countries, are they really mere products of the imagination without any ground? The "Myths and Monsters Exhibition" is themed on "mystery" which was regarded as a taboo in scientific museums in the past. It is developing mainly in Europe with a good reputation as a unique planning exhibition combining education and entertainment.

About wonder and mysterious creatures, a lot of stories have been handed down all over the world so far. It is always a popular theme which attracts public attention. The Natural History Museum London made up the unique plan based mainly on the use of various specimens and replicas it possesses. Kokoro was, as a co-producer, in charge of building the main exhibits of realistic restorations of monsters based on the traditional image of creatures in myths. Specimens of monsters? Replicas? Realistic restorations? Aren't they imaginary creatures?

A lot of specimens which are said to be the evidence of past existence of monsters are stored in the Natural History Museum London which has a long history. As science and research advances, scientific validation also proceeds to seek what these creatures really are and history of science and research and imagination of human beings are highlighted. "How monsters which should not actually exist are born?" is the academic theme of this exhibition.

The reason why such a fantastic planning exhibition can be realized as an academic planning exhibition is that there is a backbone of Natural History Museum London. In spite of possessing one of the world's largest collections, we are not just repeating stereotype planning but always trying to develop fresh and new areas. We want to continue to support and introduce such kind of ambitious planning exhibitions to Japan.

The Myths and Monsters package exhibition developing in Europe is composed mainly of monsters which are very popular in European culture. So we are also planning another version of "Myths and Monsters" which fits Japanese culture.



For any inquiry, please call us at: +81-3-3779-8506.



Myths and Monsters Exhibition developed in Europe

Myths and Monsters Exhibition Past Results

	Period	Venue
1	April 5, 1998 ~ September 13, 1998 Natural History Museum London	London (UK)
2	November 20, 1998 ~ March 14, 1999 Museum	Hague (Netherlands)
3	April 20, 1999 ~ September 5, 1999 Yorkshire Museum	York (UK)
4	October 1, 1999 ~ January 9, 2000	Stockholm (Sweden)
5	February 5, 2000 ~ June 11, 2000 Hancock Museum	Newcastle (UK)
6	July 1, 2000 ~ September 30, 2000 Museums of Natural History	Oslo (Norway)