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Cover Page Footnote

Special thanks to the following cooperators on this survey (Associate members/Japanese Association of Zoological Parks and Aquariums): Fumiyooshi Nakayama (Animal care keeper, Yagiyama Zoological Park-Sendai) Kenjiro Nagase (Zoo veterinarian, Osaka Municipal Tennoji Zoo) Teruaki Hayashi (Zoo veterinarian, Nanki Shirahama Adventure World; member of the Elephant Interest Group). In addition, information received from: Shoichi Hashimoto (Curator, Kobe-Oji Zoo), Kaoru Araki and Takashi Saburi (Animal care keeper and Zoo veterinarian, Takarazuka Zoological and Botanical Gardens), Gi-ichiro Kondou (Animal care manager, Koshien Hanshin Park), Shingo Nagata (Zoo veterinarian, Misaki Park Zoo and Aquarium), Tatsuo Abe (Superintendent, Gunma Safari World), Ikuo Kurihara (Zoo veterinarian, Akiyoshidai Safari Land), Yoshiaki Ikeda (Public relations unit, Nogeoyama Zoological Gardens of Yokohama), Sachi Hamanaka (Public relations unit, Fuji Safari Park), Takeshi Ishikawa (A.N.C. New York, USA), Kofu Yuki Park Zoo, African Safari, Miyazaki Safari Park, and Elza Wonderland. I am indebted to Ken Kawata (General curator, Milwaukee County Zoo, USA, member of the Elephant Interest Group) for his unselfish help with this article.

CAPTIVE ELEPHANTS IN JAPAN: CENSUS AND HISTORYby **Kako Y. Yonetani****Zoo Design and Education Lab, ZooDEL, 2-15 Nagate 1-chome,
Nada-ku, KOBE 657, JAPAN**

ABSTRACT: A total of 172 elephants was maintained in 68 institutions in Japan as of 1984. The elephants were distributed as follows: 89 (3/76)* Asian elephants (Elephas maximus) and 83 (19/64) African elephants (Loxodonta africana). The 68 institutions included 64 public and private zoos parks and others plus 4 circuses which held from one (1) elephant to twelve (12) elephants. Results of the survey also showed that 32 (4/28) elephants had been with their current owners for more than 20 years. The oldest elephant in Japan was held by Ueno Zoo, Tokyo; she ("Indira") was 49 years old as of 1983 when she died.

INTRODUCTION

From the summer of 1982 through early 1984, the author conducted a survey on elephants in Japanese zoos. A questionnaire was mailed to some zoos and zoo-related institutions that were listed in the newest annual report of the Japanese Association of Zoological Gardens and Aquariums (JZAA). In addition, the author directly contacted animal keepers or veterinarians in each facility. Much information was collected by sympathetic associate members not only on the census of zoo elephants but also on various captive aspects of the pachyderms. Information obtained from circuses, however, was limited.

Reactions of almost all parties involved were thick-skinned at the beginning, because accurate animal inventories or annual reports have not been regularly kept in most Japanese zoos. Therefore, with the exception of a few institutions, the respondents did not give complete answers to sections on "Captive care", "Training session" and "Chemical immobilization". These circumstances forced the author to omit some items from the planned report. Finally, the target was narrowed to obtaining the number in captivity. Principal findings of the survey will be discussed below.

A BRIEF HISTORY OF THE ELEPHANT'S ADVENT TO JAPAN

The first elephant was imported into Japan (the region presently known as Fukui Prefecture) from South Asia in 1408. Between that time and 1863 elephants were imported seven times.

The first two elephants to come to a zoo arrived in June 1888 as a gift from the Emperor of Siam (presently Thailand). They, a 15 year-old male and

*Standard notation for male/female

an 8 year-old female were kept at the Ueno Zoo (which celebrated its 100th birthday on March 20, 1982, as the oldest zoo in Japan). The female died in 1893 and the male was sold to the Hanayashiki of Asakusa, Tokyo which was a famous amusement park in late 1923.

In 1941 there were about 20 elephants in Japanese zoos. As the war worsened, these were killed off one by one. At the end of the war only three (3) females were left alive. Of the three, two were in the Higashiyama Zoo Nagoya. They had arrived in December 1937. One died in September 1963 at the age of 61, and the other in October of the same year at the age of 58. The third female was transferred to the Kyoto Zoo at the height of the war, April 1943, and died in January 1946 from malnutrition (unknown age).

The first elephant to arrive after the war was a 2.5 year-old female from Thailand, which came to Ueno on September 4, 1949. This elephant was transferred to the Inokashira Park Zoo, Tokyo, on March 5, 1954. She is still alive. The Ueno Zoo has had eleven (11) elephants since its opening (4/7 distributed as follows- Thai 2/4; Indian 1/3; Ceylonese 1/0). Five (5) of these elephants were gifts from Heads of State of foreign countries. All the elephants mentioned so far have been Asian elephants.

The first African elephant to step on Japanese soil was a young male which arrived in March 1953 with a circus. The second male African elephant arrived at the Kanazawa Zoo from Kenya on July 25, 1965. He was 1.5 years old, weighed about 700 kg and measured about 1.4 meters at the shoulder. He died at the age of 11.5 years on May 6, 1975. The first female African elephant reached the Oji Zoo, Kobe, on November 29, 1965. She was approximately 1 year old and lived only a short while.

PRINCIPAL FINDINGS

Structure of zoo elephant population

As of 1984, results of the survey showed that a total of 172 elephants was held in 68 zoos (public and private) and other institutions in Japan. The 172 elephants are almost equally divided between the Asian (89) elephants and African (83) elephants. The ratios of males to females were approximately 1:6 in Asians and 1:3 in Africans: Asians-13 males, 76 females, 1 unknown sex; Africans-19 males and 64 females (See Table 1). The public zoo category contained 33 municipal, 1 prefectural management and 2 juridical foundations (Ritsurin Park Zoo and Okinawa-Kodomonokuni Zoo and Aquarium), a total of 36. Of 68 institutions (excluding circuses), 28 had one elephant each and of these individuals, 25 were Asian (2/23) and 2 were African females and 1 male as of 1984. Nine zoos exhibited both Asian and African elephants. The largest number of elephants kept by any one institution was 12 (Fuji Safari Park). Eight (8) institutions had 5 or more elephants. In this connection, commercialized zoos, including safari parks and private animal facilities, and excluding circuses, owned 93 elephants in the census.

TABLE 1. ELEPHANTS IN JAPAN AS OF 1984

Institution Holding Elephants	Asian		African		Total
	Male	Female	Male	Female	
African Safari, Oita	0	1	2	8	11
Akiyoshidai Safari Land, Yamaguchi	0	0	1	6	7
Asahikawa-Asahiyama Zoo*(a)	0	1	0	1	2
Asa Zoological Park, Hiroshima*	0	0	1	2	3
Ayameike Zoo, Nara	0	1	0	0	1
Cable Rakutenchi Oita	0	1	0	0	1
Ehime Prefectural Dogo Zoo*	0	2	0	0	2
Elza Wonderland, Aichi+ (b)	1	0	0	0	1
Fuji Safari Park	0	0	2	10	12
Fukuoka Municipal Zoological & Botanical Gardens*	0	2	0	0	2
Fureai Childrens Zoo+	1	1	0	0	2
Gunma Safari World	0	1	1	4	6
Hamamatsu Municipal Zoo*	0	2	0	0	2
Himeji Central Park	0	0	2	7	9
Himeji Municipal Zoo*	0	1	0	0	1
Hirakawa Zoological Park, Kagoshima*	1	1	0	0	2
Hitachi City-Kamine Zoo*	0	1	0	0	1
Holiday-Inn Circus+	0	2	0	0	2
Ikeda Zoo, Okayama	0	1	0	0	1
Inokashira Park Zoo, Tokyo*	0	1	0	0	1

Table 1 Continued

Institution Holding Elephants	Asian		African		Total
	Male	Female	Male	Female	
Itozu Zoological Park, Fukuoka	0	2	0	0	2
Iwaki World Safari+	0	0	1	3	4
Izu Natural History Park	0	1	0	0	1
Kakinuma Circus+	0	1	0	0	1
Kanazawa Zoo, Ishikawa	0	1	0	0	1
Kannawa (Yama-jigoku) Zoo Oita+	1	0	0	0	1
Kigure Circus+	0	2	0	0	2
Kiryugaoka Park Zoo*	0	1	0	0	1
Kinoshita Circus Performing Ltd.+	0	2	0	0	2
Kobe-Oji Zoo*	1	1	0	0	2
Kofu Yuki Park Zoo*	0	2	0	0	2
Komoro Zoo*	0	1	0	0	1
Korankei Snake Center, Aichi+	1	0	0	0	1
Koshien Hanshin Park, Hyogo	0	2	0	0	2
Kumamoto Zoological Park*	0	1	0	0	1
Kushiro Zoo*	0	0	1	1	2
Kyoto Municipal Zoo*	0	2	0	0	2
Misaki Park Zoo & Aquarium, Osaka	0	2	0	0	2
Mishima City Park, Rakujuen*	0	1	0	0	1
Miyazaki Safari Park	0	0	2	5	7

Table 1 Continued

Institution Holding Elephants	Asian		African		Total
	Male	Female	Male	Female	
Nagano-Chausuyama*	0	1	0	0	1
Nagasaki Bio-Park	1	2	0	0	3
Nagoya-Higashiyama Zoo & Botanical Gardens*	0	2	1	2	5
Nanki Shirahama Adventure World	0	4	0	6	10
Nasu Safari Park+	1	0	1	0	2
Nogeyama Zoological Gardens of Yokohama*	0	2	0	0	2
Obihiro Zoo*	0	2	0	0	2
Odawara Zoo*	0	1	0	0	1
Okinawa-Kodomonokuni Zoo & Aquarium*	0	0	1	0	1
Omuta Zoo*	0	0	0	1	1
Osaka Municipal Tennoji Zoo*	0	3	0	0	3
Phoenix Natural Zoo, Miyazaki	0	1	0	0	1
Ritsurin Park Zoo, Kagawa*	0	1	0	0	1
Sapporo-Maruyama Zoo*	0	2	0	0	2
Sasebo Subtropical Zoological Botanical Garden*	0	1	0	0	1
Shizuoka Municipal Nihondaira Zoo*	0	2	0	0	2
Shonan Animal Planning+	0	1	0	0	1
Takarazuka Zoological & Botanical Gardens	1	2	0	0	3
Tama Zoological Park, Tokyo*	1	2	1	2	6

Table 1 Continued

Institution Holding Elephants	Asian		African		Total
	Male	Female	Male	Female	
Tobu Zoological Park, Saitama	0	0	1	1	2
Tokushima Zoo*	0	1	0	0	1
Tokuyama Zoo*	0	0	0	1	1
Touhoku Safari Park Fukushima+	0	0	0	3	3
Toshin-Planning	unknown sex (probably male)				1
Toyohashi municipal Zoo*	1	1	0	0	2
Ueno Zoological Gardens, Tokyo*	1	1	0	0	2
Utsunomiya Zoo	0	1	0	0	1
Yagiyama Zoological Park-Sendai*	0	2	1	1	4
Totals 68 Institutions (c)	13	76	19	64	172

Footnotes to Table 1.

(a) * = Public Institutions (including juridical foundations)

(b) Institutions marked with + are not official members of Japanese Association of Zoological Gardens and Aquarium.

(c) The following is a list of institutions and the subspecies of elephants (when known) as ascertained by the author:

Himeji Zoo ... Thai (0/1)

Hirakawa Zoo ... Thai (1/0)

Inokashira Zoo ... Thai (0/1)

Itozu Zoo ... Ceylonese (0/2)

Kanazawa Zoo ... Thai (0/1)

Kodomonokuni by the route of the closed Yatsu Zoo, and Elza Wonderland ... Africian Forest elephant (Loxodonta africana cyclotis) (1/0)

Korankei Snake Center ... Thai (1/0)

Kyoto Zoo ... Malayan (0/1)

Nanki Shirahama Adventure World ... Thai (0/2)

Nogeyama Zoo ... Thai (0/1), Indian (0/1)

Osaka-Tennoji Zoo ... Indian (0/1)

Shizuoka-Nihondaira Zoo ... Indian (0/1)

Takarazuka Zoo ... Thai (1/2)

Tama Zoo ... Ceylonese (1/0), Cambodian (0/1)

Ueno Zoo ... Indian (0/1), Thai (1/0)

It is the author's feeling that there cannot be an accurate source for a head count of elephants in captivity. In small local facilities or dealer compounds the author could not determine how many elephants were present. However, the author hopes the above survey will serve as a "yardstick" to review the trend in captive elephants in our country in the future.

Recent records of captive elephants

In the Japanese zoo, the first unsuccessful attempt at raising an elephant herd began at the Miyazaki Safari Park in 1975. That trial consisted of a group of eight African elephants. Another effort was made at the African Safari at Oita, where they held 22 African elephants (5/17) in two groups which were led by two females from September 1977 to April 1980. At that time, three female Asian elephants were also there.

Following are three elephant-related events of particular interest.

One: many Asian elephants came from Thailand to Japan in order to join a ceremony, "National Day" of Expo '70 in 1970. Twenty (20) elephants (adults. 8/8 and 4 calves) marched in the street from the port of Kobe to the suburbs of Osaka (about 50 Km). This has occurred only once in Japan. Subsequently these elephants spent about four and one half months from early May until September at the "Expo" site. Moreover it was here that a successful birth was observed (See an item under Breeding for details). One female calf was contributed by the government of India to Osaka Municipal Tennoji Zoo as a substantial reminder of this exposition.

Two: 12 Thai elephants were brought to Japan to appear on a stage prepared specially for an elephant show by the Nagashima spa in Mie prefecture which provided entertainment for 50 days from mid-March to early May 1979.

Three: 12 Asian elephants were brought again to promote friendly relations between our country and Thailand on a larger scale. Their exhibition was held in the Nanki Shirahama-Adventure World for 165 days from mid-March to the end of August 1981. In remembrance of this elephant festival, two females (4 and 3 years old) were presented by the government of Thailand on August 13, 1982.

Sources of elephants

Animal dealers have been the most common source of zoo elephants, followed by countries of origin such as India, Thailand, Cambodia, Malaysia, Sri Lanka, Kenya and the Republic of South Africa. It is extremely difficult to determine the geographical origin of zoo elephants. In spite of this, the author tried to pursue the respective origins as much as possible. As a result, some elephant subspecies were specifically identified. Of those, an African forest elephant belonging to a certain animal training production and a Ceylonese elephant belonging to a small animal dealer were found.

Longevity

Thirty-three elephants (4/29) had been with current owners for more than 20 years at the time of survey (See Table 2). However, this time span merely indicates the period maintained by the owner and may not state the animals' total years in captivity. All these elephants are Asian.

The oldest elephant in the survey was 49 year-old "Indira" in the Ueno (pronounced "Way-no") Zoo, Tokyo. She arrived at the zoo on September 25, 1949, at the age of 15, and died on 11 August, 1983. The late Prime Minister Jawaharlal Nehru of India presented her to the people of Japan as a messenger of peace. She was named after his daughter (Indira Gandhi, the late Prime Minister).

SITUATION OF CAPTIVE MALE ELEPHANTS

As matters stand, breeding male elephants do not exist in Japan. However, it is said that the possibility of breeding captive elephants has a bright future. In my opinion, some institutions which keep African elephants may be able to breed them. But there is little chance for the Asian elephants. This is because most Japanese zoos need to solve many other problems beforehand, such as: synchrony in puberty, a disparity on the pair's ages, a capacity for supervision of the males, and other management matters.

TABLE 2. ELEPHANTS KEPT IN JAPANESE ZOOS OVER 20 YEARS

Zoo	House Name	Origin If Known	Sex	Presumed Age
African Safari	Winky	Asia	F	31
Ayameike Zoo, Nara	Hana	Asia	F	24-25
Gunma Safari World	ElieMay	Asia	F	33
Himeji Municipal Zoo	Himeko	Thailand	F	above 35
Hirakawa Zoo, Kagoshima	Dom	Asia	M	above 35
Hitachi City, Kamine Zoo	Hanako	Asia	F	30
Inokashira Park Zoo, Tokyo	Hanako	Thailand	F	39
Izu Natural History Park	Jambo	Asia	F	25

Table 2 Continued

Zoo	House Name	Origin If Known	Sex	Presumed Age
Kanazawa Zoo	Miyako	Thailand	F	42
Kobe-Oji Zoo	Taro	Asia	M	38
	Suwako	Asia	F	42
Koshien Hanshin Park	Akiko	Thailand	F	39-40
	Kikuko II	Asia	F	35-36
Misaki Park Zoo	Izumi	Asia	F	30-31
	Midori	Asia	F	30-31
Nogeyama Zoo, Yokohama	Hamako	India	F	39
	Mariko	Thailand	F	27
Obihiro Zoo	Nana	Asia	F	24
Rakujuen	-----	Thailand	F	above 23
Ritsurin Park Zoo	-----	Asia	F	above 23
Sapporo-Maruyama Zoo	Hanako	Asia	F	38
Takarazuka Zoo	Mary	Thailand	F	37
Tama Zoo, Tokyo	Anura	Ceylon	M	31
	Takako	Asia	F	37
	Gacha	Cambodia	F	above 27
Tennoji Zoo	Haruko	Asia	F	above 34
	Yuriko	Asia	F	above 34
Tokushima Zoo	-----	Asia	F	above 23
Ueno Zoo, Tokyo	Indira*	India	F	49
	Jambo	Thailand	F	41
	Menam	Thailand	M	22
Yagiyama Zoo-Sendai	Toshiko	Asia	F	29

*Total of 31 elephants; this total excludes "Indira" the elephant which died in 1983.

There were 12 zoos and zoo-related institutions that raised male elephants in the past years, no matter how short the term of keeping might be (more than one year). These are:

- Asians: Asahiyama Zoo, Hamamatsu Zoo, Tennoji Zoo, Ikeda Zoo, Cable Rakutenchi, Hanayashiki (a closed zoo), Kannawa Zoo (belonging to a tourist hotel), Kyoto Zoo
- Africans: Kanazawa Zoo, Namegawa Island, Yatsu Zoo (a closed zoo), Higashiyama Zoo

At present 26 zoos have males, including Asians and Africans; two institutions have males of both species.

The total of male elephants was 32, 24 of which were older than 10 years of age. They were 12 Asians and 20 Africans. The 32 elephants were distributed as follows as of 1984:

- Asians: Elsa Wonderland (1), Fureai Children Zoo (1), Hirakawa Zoo (1), Kannawa Zoo (1), Kobe-Oji Zoo (1), Korankei Snake Center (1), Nagasaki Bio-Pak (1), Nasu Safari Park (1), Takarazuka Zoo (1), Tama Zoo (1), Toyohashi Zoo (1), Ueno Zoo (1).
- Africans: African Safari (2), Akiyoshidai Safari Land (1), Asa Zoo (1), Fugi Safari Park (2), Gumma Safari World (1), Higashiyama Zoo (1), Himeji Central Park (2), Iwaki World Safari (1), Kushiro Zoo (1), Miyazoki Safari Park (2), Nasu Safari Park (1), Okinawa-Kodomonokumi Zoo & Aquarium (1), Tama Zoo (1), Tobu Zoo (1), Yagiyama Zoo (1).

Asian & African: Nasu Safari Park and Tama Zoo

BREEDING

A pair of Thai elephants were received at the Takarazuka Zoo, in 1950. The first observed mating of elephants in Japan occurred there on April 10, 1962. The male was 13 years old and weighed 2.8 tons; the female was 14 and weighed 2.6 tons. Thereafter, they mated every 30 days until the following May. The female was given a pregnancy test in August 1963, and the results were positive. Around February 1964 her abdominal region began to expand and her mammary glands swelled. On May 6, 1965, at 8:47 a.m. a male calf was stillborn due to asphyxiation. It weighed 133.3 kg and measured (in cm) shoulder height, 87; distance from top of trunk to tip of tail, 224; chest girth, 113.5; trunk length, 44; tail length, 51; right ear, 30.5 x 27. This was the first pregnancy and birth of an elephant in Japan.

The male of the pair died (cause believed to be dislocation of his right forefoot) on June 9, 1964. At this time, the elephants' room was too small

(45 square meters) and their enclosure was by the side of a railway and they were always troubled with train noises. The female who is 36 years old lives in the same place to this date.

The second birth of an elephant in Japan occurred 16 August 1970, about 2:00 a.m. The dam was estimated to be 18 years old and had delivered twice before. The calf measured (in cm): shoulder height, 92; distance from head to base of tail, 102; chest girth, 120; trunk length, 40; left ear, 30 x 25.

The first African elephant (a male) born in Japan was delivered on 31 January 1984 at the Gunma Safari World. The dam, "Sakuve", estimated to be 15-16 years old, was imported through the International Animal Exchange, Ferndale, Michigan, USA in 1979. The sire was about the same age as the dam. The dam had a hard labor that lasted for 16 hours. The calf died 30 minutes after birth due to breathing difficulties. It weighed 125.7 kg and his length was 1.22 meters. The three remaining females at Gunma Safari World are all possibly pregnant as of 1984.

LOGO (symbol mark)

Several zoo facilities are using logos designed from photographs of an elephant in Japan. A logo with an African elephant is used by Gunma Safari World, Nanki Shirahama World Safari and Asa Zoological Park. And a logo with an Asian elephant (designed by the author) is used by Obihiro Zoo, Dogo Zoo, and Osaka-Tennoji Zoo. In addition, the Japanese Association of Zoological Gardens and Aquariums (JZAA) has a logo with an Asian elephant. The JZAA has 137 members which represent 83 zoos and 54 aquariums as of 1986.

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Special thanks to the following cooperators on this survey (Associate members/Japanese Association of Zoological Parks and Aquariums):

Fumiyoshi Nakayama (Animal care keeper, Yagiyama Zoological Park-Sendai)
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Notes added in proof: After this survey was completed, one male Asian elephant was added to the Nagano-Chausuyama Zoo. Two female Indian elephants reached Ueno Zoo in the early dawn of Sept. 20, 1984. Asha (7.5 year-old) and Daya (7 year-old) were a gift from the Government of India to replace the famous Indira. Another couple of Indian elephants (Bon and Yako) were presented in commemoration of the 20th anniversary for the sister-city's relationship between our Yokohama and Bombay, India. They arrived in Kanazawa Nature Park belonging to Noge-yama Zoo, Yokohama, on April 27, 1985. Bon was a 9 year-old male and Yoko was a 7.5 year-old female. In the morning of May 5, 1986, the African female "Sakuve" (19) at Gunma Safari World gave birth to a male calf which has survived to this printing. The sire was "Richard" (20). This is the first successful birth of an African elephant in Japan.

Editors' note: A version of this article was published in two parts by the Animal Keepers' Forum, a monthly journal of the American Association of Zoo Keepers, Inc. (Part I, June 1984, Vol. 11, 6:177-189; Part II, July 1984, Vol. 11, 7:211-217).