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The Japanese Crested Ibis and the White Ibis

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(With 2 Text-figures)

Whether an animal or a plant, once it has died out, it can never be restore to life again even by the best technique of man who is the lord of creation.

Early in 1955, the International Union for the Protection of Nature whose head office is in Brussels, Belgium wrote to the Japanese member organization, the National Parks Association, asking what were the animals and plants which were facing the danger of extinguishment, how the situation stood and what they were doing to protect them; and the National Parks Association, after discussing the matter with other societies concerned, wrote them in answer that they were Common Otter *Lutra lutra lutra* (Linné) and Yezo Sable *Mustela zibellina brachyura* (Temminck et Schlegel), belonging to mammals, and Steller's Albatross *Diomedea albatrus* Pallas, Eastern Ring-dove *Streptopelia decaocto stoliczkae* (Hume), Tristram's Woodpecker *Dryocopus richardsi* Tristram, Japanese Stork *Ciconia ciconia boyciana* Swinhoe and Japanese Crested Ibis *Nipponia nippon* (Temminck), which belong to fowl, and *Parnassius eversmanni daisetsuzana* Matsumura, belonging to insect —8 species in all.

Among the five species of fowl, though all of them are under bad condition, Tristram's Woodpecker, a remarkable species in Tsushima Island, and which is of big size and beautiful, might have been extinguished, as we do not hear from any source since the beginning of the Shôwa Era, that somebody has seen it.

The animals which inhabited and have been extinguished in Japan are Yezo Wolf *Canis lupus hattai* Kishida in Hokkaido, Japanese Wolf *Canis lupus hodopylax* Temminck et Schlegel in the Mainland, Kyushu and Shikoku and, although not wild, a strange horse named "Ushi-uma" in Tanegashima Island, belonging to mammals, and Miyako Kingfisher *Halcyon miyakoensis* Kuroda in Miyako Island among Riu Kiu Islands, Bonin Grosbeak *Chaunoproctas ferreirostris* (Vigors), Kittlitz's Ground-thrush *Turdus terrestris* Kittlitz, Bonin Night-heron *Nycticorax caledonicus crassirostris* Vigors, Bonin Wood Pigeon *Columba versicolor* Kittlitz in Bonin Island and above-mentioned Tristram's Woodpecker, which belong to fowl. Siberian White Crane *Grus leucogeranus* Pallas, Black Stork *Ciconia nigra* (Linné) and White Ibis *Threskiornis melanocephala* (Latham) have ceased entirely to migrate in Japan; and those that are in danger of extinguishment are Japanese Stork (according to the record made in 1955, 16 of which are remaining in Hyôgo Pref.), Japanese Crested Ibis (less than 30 remaining in Niigata & Ishikawa Prefs.), Steller's Albatross (31 in Torishima Island, Izu) and Eastern Ring-dove (less than 30 in Saitama & Chiba Prefs.). Japanese Stork and Japanese Crested Ibis are now appointed by the Government as Special Natural Monuments, but we can never be optimistic about them, and, above all things, it is desired that the people of their inhabiting place would take good care of them.

I am going to state hereafter about the existing condition of Crested Ibis and White

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Ibis in Japan.

The Japanese Crested Ibis, *Nipponia nippon* (Temminck)

Ibis Nippon Temminck, Pl. Col., pl. 551 (1835)
Nipponia Temminckii Reichenbach, Av. Syst. Nat., p. xiv. (1853)
Ibis sinensis David, Comp. Rend. Acad. Paris, 75, p. 64 (1872)
Ibis nippon, Seebohm, Birds Jap. Emp., p. 232 (1890)
Nipponia nippon, Bonaparte, Consp. Gen. Avium, ii, p. 152 (1855); Sharpe, Cat. Birds Brit. Mus., xxvi. p. 15 (1898); Hartert, Vög. paläark. Fauna, ii, p. 1225 (1920); Peters, Check-List B. World, i. p. 133 (1931); Hachisuka et al., Hand-List Jap. Birds, third and revised ed., p. 115 (1942).

This bird is called Toki in Japanese. Although I had often seen it in specimen, I had never been able to see it alive, and the same thing had applied to almost all ornithologists in Japan. On March 1, 1953, however, a Toki was found unexpectedly in the heart of a mountain in Sadogashima Island, Niigata Pref., caught in a trap which had been set for catching Racoon Dogs, struggling with its leg hurt; and it was brought to the Uéno Zoo, Tokyo, on April 19 that year, and was presented to the public. It was perhaps for the first time that Toki had come to the zoo in Japan, and due to this, I could observe it closely several times, but to our great regret, it died six months after that.

As regards the specimens of this bird, many of them were lost in the air-raid during the last World War, although there had been quite many before the War. There are ten stuffed skins of Toki kept in the specimen room of our institute, and eight of them are of Korean breed, and the others were caught in Niigata Pref. in February, 1893. There are three specimens of Toki in the specimen room of the Wild-life Research Institute of the Forestry Agency, and one of them is of Sadogashima Is. breed and another one was collected in Kanamaru, Koshijino Village, Hakui Gun, Ishikawa Pref.

Toki belongs to Threskiornithinae, Threskiornithidae. Threskiornithinae consists of 17 genera, 27 species, and the genus *Nipponia* is made up of one species, and its scientific name is widely known, as it is closely related to Japan as mentioned above. In general, not only in Japan but also in any other country, big birds with whitish wings are apt to be shot as they attract men's attention. Before the Meiji Era, they had often been seen in the suburbs of Edo (present Tokyo). However, since the Meiji Renovation down to 1892, when the hunting regulations were established for the first time and the protected birds were appointed, big, graceful wild birds such as cranes, storks and swans were hunted recklessly by the thoughtless people who had gone excess being affected by the sudden change of the social system and took advantage of the loopholes of the law, and they all came to face the danger of extinguishment. It is regrettable that Toki, too, was not the exception of the case. And in the beginning of Shôwa Era, even the students of birbs were not sure of ist habitat.

A little later, however, it came to be sure that this bird was in existence near Ochigata, Ishikawa Pref. and Oki Island as well as Sadogashima Island. As regards Toki in Sado Is., it came to be known to the students through the local newspaper that, on the occasion of a certain meeting held in June, 1930, Mr. K. Goto who lived in Niiho Village, Sado Is. said Toki was still living in the heart of mountains of Niihomura, although it was stated in the text books for high schools that Toki had already disappeared from Japan. Then it was suggested that they should appoint the Toki as natural monument, and in May 1932, Dr. S. Uchida went to Sado Is. to make an inquiry into it, and found out a couple of Toki flying lively, and confirmed that they bred in the Island as their eggs had been found in the nest dropped on the ground in the storm. In June, 1933, Mr. K. Shimomura went over to Sado Is. and in the heart of a mountain in Niiho Village, succeeded in taking pictures of Toki in the nest. In December, 1934, Toki in Sado Is. was appointed as natural monument.

Sado had been the habitat of Toki from olden times, and the local people knew it so well that it was even used for making soup. There are now very few of them, and according to the investigation of Mr. Haruo Sato, teacher of Morotsu High School in the Island, there were 22 Tokis in 1952, 14 in 1953, 12 in 1954 and 11 in 1956, and it makes us feel uneasy about the existence of the bird. In view of the above, you cannot always see Toki easily even if you go over there, and if one is not in good luck, he cannot see it even for a whole week. In 1952, this bird, not only in Sado but all over Japan was appointed as special natural monument. A special natural monument is equivalent to a national treasure in case of cultural goods, and unless otherwise it is of great value, it is not accepted as special natural monument. In December, 1953, the local people established a society for the preservation of Toki.

There are many people who are earnest in the protection of birds, and Toki was appointed as Prefectural Bird by such people. It is without precedent that a prefectural bird was appointed in Japan, while in the U.S.A., the state birds are appointed as well as the national bird, and they seem to have followed this example. In December, 1954, the Government set up a game preserve for Toki in order to strengthen its protection; therfore, in that area, all kinds of birds have been protected from being shot. Inside the boundary, sign boards are put on the trees at important positions to make the boundary line clear, and watches are going around. However, I regret to say that there still seem to be poachers. I heartily pay my respects to the members of the protective society, especially to Mr. H. Sato, teacher in biology of Morotsu High School.

On the other hand, judging from the old literatures which still remain at present, it is obvious that, before the Meiji Era, the ibis inhabited everywhere in Ishikawa Pref. They were called Doh because of their cry. It is supposed that there were a considerable number of ibis then (in 1759), as one of the old literatures tells us that people picked up the feathers of the ibis and offered them to their clan, Maeda. The feathers also were used as convenient tools for cleaning the household Buddhist alters, and they say there are many old families which keep a feather of the ibis in their alters. The plumage of the ibis is almost white, but the primaries and the secondaries of all rimages of its wings are of pale rose,

and they have called it from the olden times ibis colour (pale rose). The colour is also seen in other parts of its body. Such feathers were used by Samurai for feathers of the ornamental arrows, and for feather-brooms by the devotees of tea ceremonial.

After that, the ibis in Ishikawa Pref. faced the danger of extinguishment. Around 1929 to 1930, however, it was known that the ibis inhabited all over around Ohchigata Lagoon which lies between Kashima-gun and Hakui-gun, Ishikawa Pref. for, in December, 1929, a hunter had shot a strange bird, and it was found to be an ibis afterwards when it was preserved as stuffed skin.



Fig. 1. An ibis at the Sado Island, Niigata Pref. Photo by H. Sato (1956).

In May, 1930, a villager found five to six ibises among the flock of egrets, and in October of the year, a part of Koshijino Village and a part of Shimoamada Village, both in Hakui-gun, were thus appointed as game preserves for 10 years onward. After that, however, information about the ibis came to be uncertain, and I myself thought that it might have extinguished already. Unexpectedly, however, it was found very recently that there were some still remaining. In March, 1954, there was a man who reported that he had found a dead ibis in the forest of Kashima-gun. Three of them flew into Hakui-gun in March, 1955, and in July same year, five of them were seen. In September, they got information that six ibises seemed to be in Sué Area, Mii Town, Wazima City. In 1955, the Board of Education of Ishikawa Pref. established an examination system and those appointed examiners tried hard to observe them. There are two colonies for the ibises in Ishikawa Pref.; one of them is Sué Area, Wazima City, and the other is Hakui-gun, and there are five and eight respectively. They in both colonies are said to be breeding. There is one among the examiners who, after great difficulties, succeeded in taking pictures of the living status of the ibis. The ibis in Ishikawa Pref. is of different colony from the ibis in Niigata Pref. It

was known to the academy concerned after Shôwa Era, that the ibis also inhabited the Oki Islands. In December, 1929 and April, 1940, when late Dr. Ikio Sato made an investigation, there were four to eight ibis in Dozen Island, one of the Oki Islands. Later, however, it appears that they have died out, as no one has seen it. The ibis in Japan are altogether 24, at least 13 of which being in Ishikawa Pref. and at least 11 in Niigata Pref.

Ibis is a special species breeding in Eastern Asia (not only in Japan), and they breed in Ussuriland, Korea, Japan, North China, old Manchuria, etc., and they distribute down to Hainan Island in the south. In Japan, they were in the southern part of Hokkaido, Mainland, Shikoku and Kyushu. Records show that, during Taishô Era, the ibis were obtained in Kitaazumi-gun, Nagano Pref., Mugi-gun, Gifu Pref., and Yoshinogawa, Tokushima Pref. They as well as Japanese Stork *Ciconia ciconia boyciana* Swinhoe, are facing the greatest danger of extinguishment at present.

Both male and female of the ibis are of the same colour, and its black beak, although point and root part of which are red, is big, long and sickle-shaped. Its face is without feathers and of fresh vermilion-red colour. Its legs are brownish red. Feathers on the back of its head are long and slender and make crown feather. This bird, after all, gives us the impression that it has all its distinctive features on its head. The plumage is, as mentioned above, white, and so red and white show a remarkable contrast.



Fig. 2. Three ibises flying in the sky at Wazima City, Ishikawa Pref. in 1956.

The plumage of the ibis, however, has two phases. Besides the one of white phase described above, there is another of gray phase. The latter is gray on the back of its head, throat, shoulders and back, and the other part is, on the whole, white. Its tail-feathers and rimages are of Toki colour (pale rose), just as they are in the case of the ibis which has the white phase. This colour of plumage is simply a colour phase, and the understanding that the colour of the plumage of

juvenile ibis is gray and it turns into white, when it becomes an adult and its plumage molt is not right. The ibis of Sado breed which was being kept in the Uéno Zoo was not showy, as it was of gray phase.

The White Ibis, *Threskiornis melanocephala* (Latham)

Tantalus melanocephalus Latham, Index Ornith., ii. p. 709 (1790)

Threskiornis melanocephalus, Gray, Cat. Mamm. etc. Nepal pres. Hodgs., p. 137 (1846); Hartert, Vög. paläark. Fauna, ii, p. 1227 (1920)

Ibis melanocephala, Seebohm, B. Jap. Emp., p. 232 (1890); Sharpe, Cat. Birds Brit. Mus., xxvi. p. 7 (1898).

Threskiornis melanocephala, Peters, Check-List B. World, i. p. 131 (1931); Yamashina, Nat. Hist. Jap. Birds, ii, p. 911 (1941); Hachisuka et al., Hand-List Jap. Birds, third and revised ed., p. 115 (1942)

Probably the White Ibis came as summer visitant and bred in Honshu before the Meiji Era in Japan. Most of the localities where the White Ibis have been collected are in southern Kanto with the exception of Hakodate, Hokkaido, and they are as follows:

Kaminoda, Misonomura, Kita-adachi-gun, Saitama Pref.; Iruma River, Iruma-gun, Saitama Pref.; Kameido, Koto-ku, Tokyo (1883); Omori, Ota-ku, Tokyo; Tokyo (1874); Shinhama, Higashi-katsushika-gun, Chiba Pref.; Yokohama, Kanagawa Pref.

Although some of the ibis appeared in other places besides southern Kanto, no specimen was preserved.

Among the above stated localities, the Egrets Hill (or Sagiyama) at Noda in Saitama Pref. for the colony of egrets, is popular, and they probably inhabited there and bred among Eastern Large Egrets, Plumed Egrets, Little Egrets, Indian Cattle Egrets and Night-herons. The reason why it makes us consider so is that there are picture scrolls handed down in both families of Nagai and Atsuzawa on which the state of breeding egrets in those days are drawn, and they show us that, in 1855, in Sagiyama, Noda, many kinds of Egret gathered together and bred. The pictures show a pair of White Ibis perching on the top of a tree, but neither nest nor chicks are drawn; accordingly, we can not know evidently from these pictures their breeding status.

The reason why the White Ibis ceased migration to Japan is unknown, but probably, the White Ibis was easily found because of its colour, and so the hunters destroyed them mostly after Meiji Era. No record has been found among old books that confirms their breeding in Japan, besides the above stated picture scrolls. The authoritative monographs on birds in Japan say "White Ibis bred at Sagiyama, Noda", but I better state as "probably bred in olden days."

The specimen room of our Institute has a skin of this species which was collected at "Kameido" on January 22, 1883 (Meiji 16). The specimen is of male with winter plumage and has no breeding plumages and is probably the last one collected in Tokyo. As I consider the White Ibis a summer visitant, the date of

collection sounds strange to me. The scroll of Japanese birds made by Shimazu clan in the Tokugawa Era also shows this species with winter plumage. However, I am still in doubt as to whether it was a resident as the Crested Ibis or a summer visitant.

In breeding season at the Egrets Hill, Noda, more than 10,000 of various egrets make colonies, but no White Ibis is found at present. Japan has neither breeding place nor visiting place for the White Ibis. However, who can assure that they do not visit us at all? Here I must state the two exceptional examples. One was found in flight at Shinhama, Chiba Pref. in May, 1955, and the other was collected near the river Bihoro, Abashiri-gun, Hokkaido in October, 1955 which was mounted and is being preserved in Sapporo.