

# Current status and Conservation of Oriental White Stork in Japan



University of Hyogo & Hyogo Park of the Oriental White Stork

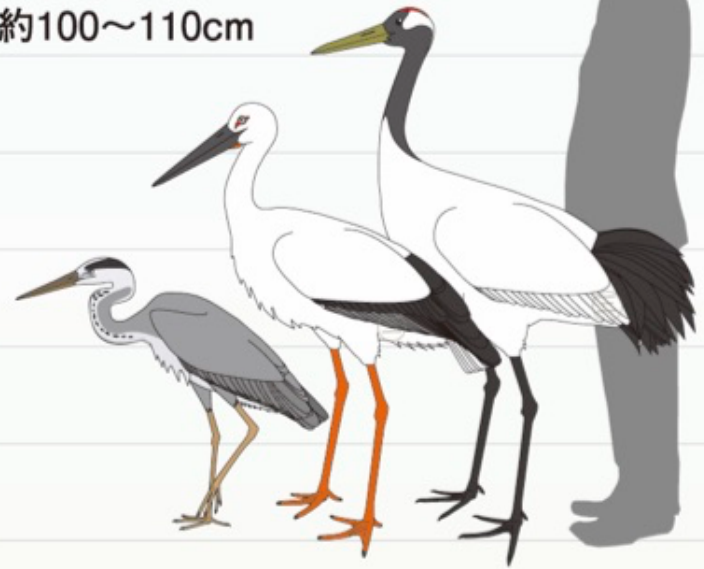
Tomohiro Deguchi, Ph.D.



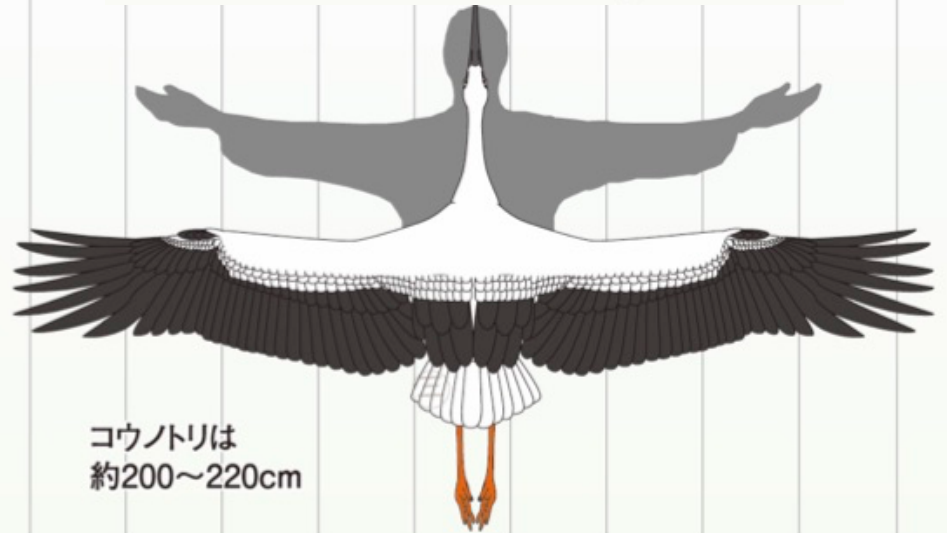
## Description

Oriental White Stork  
*Ciconia boyciana*

コウノトリは  
約100～110cm

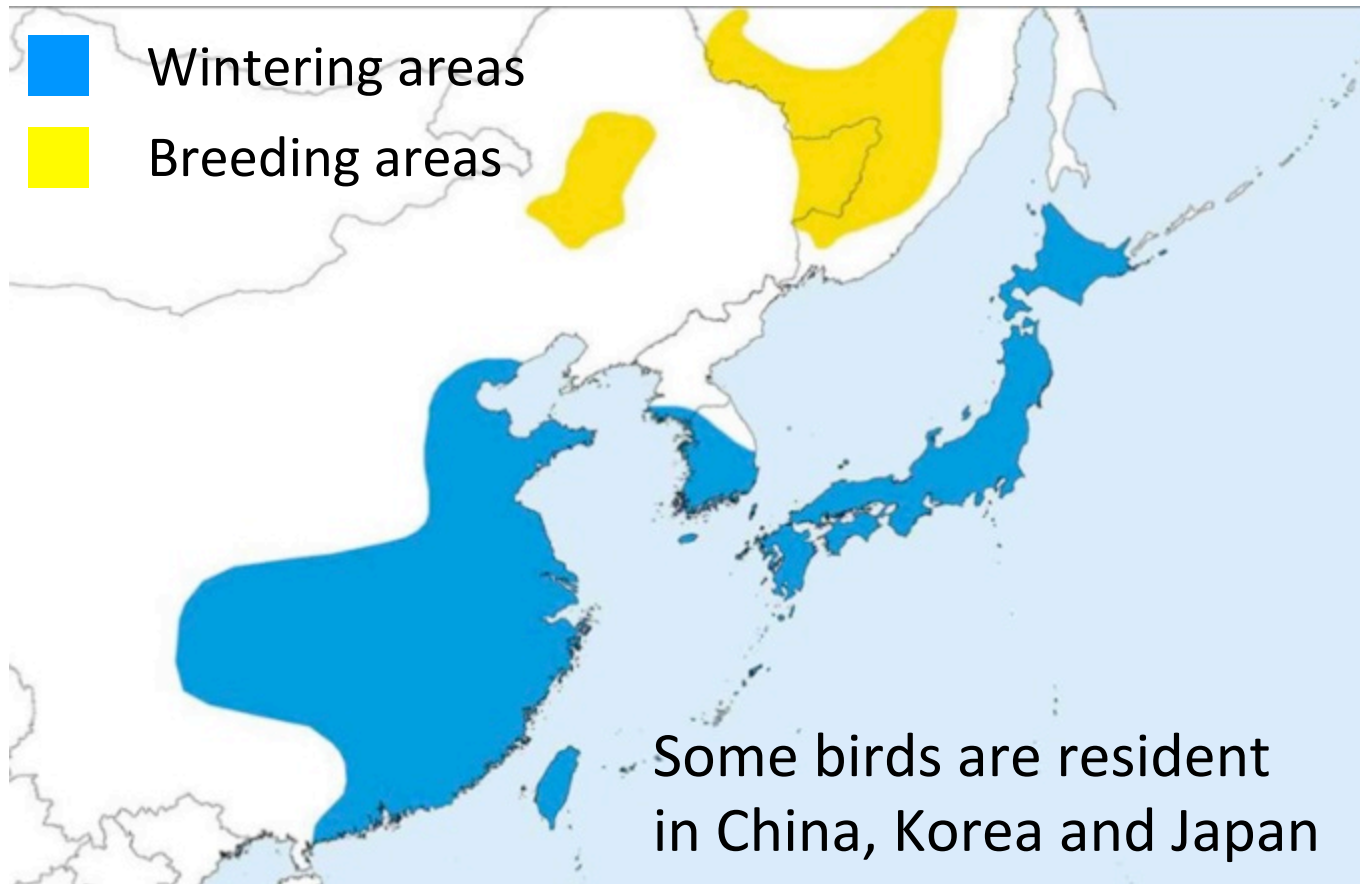


コウノトリは  
約200～220cm



Body weight: 3~6 kg

# Distribution and Migration

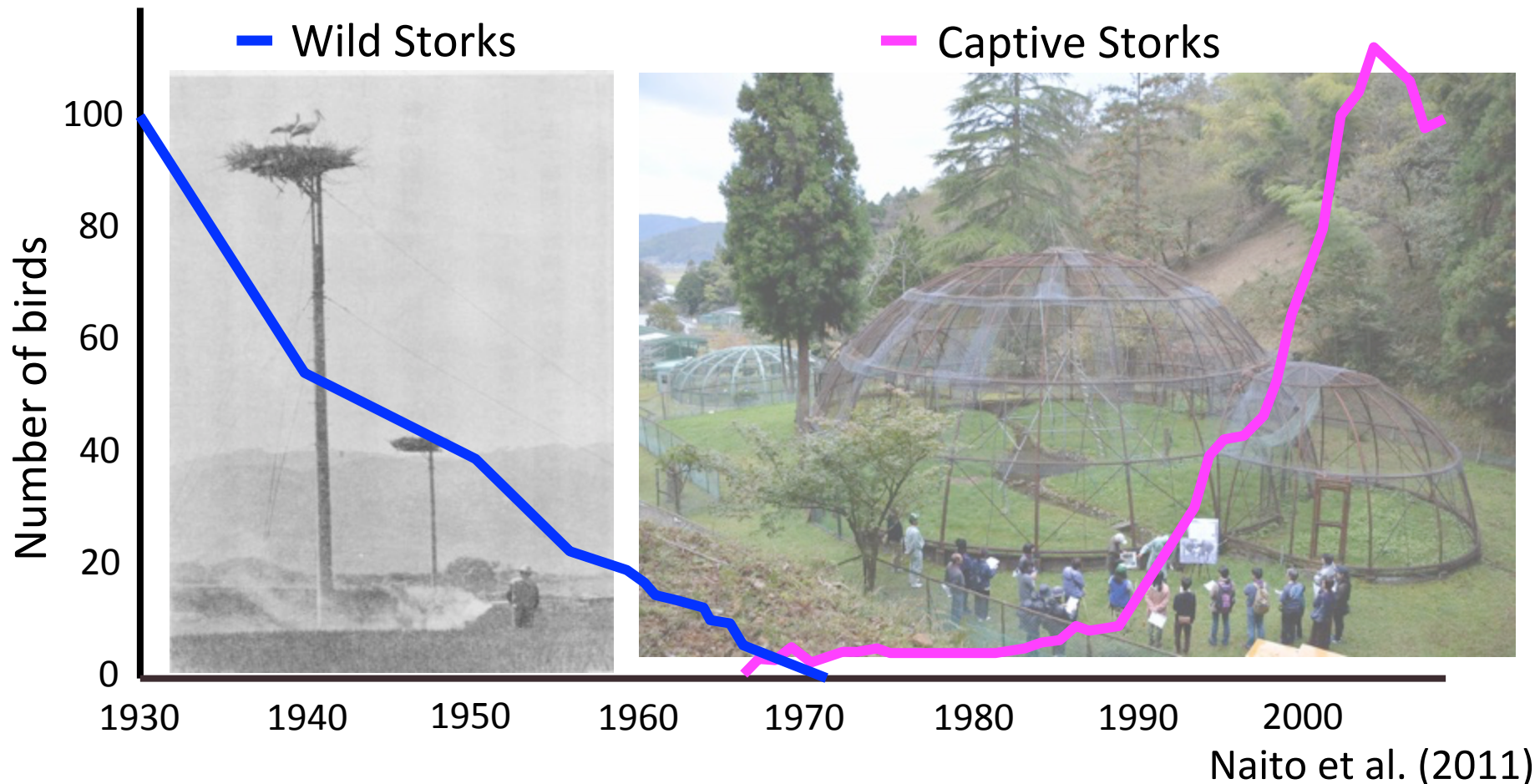


Total population: 1,000~2,500 birds  
IUCN criteria: “Endangered”



# Conservation history in northern Hyogo (Tajima)

- Declined from overhunting, habitat loss, pollution and inbreeding
- Japanese wild population became extinct in 1971
- Storks have been increased in captivity since 1965



- Hyogo Park of the Oriental White Stork was established in 1999
- Captive breeding has been carried out considering genetic diversity





- Toyooka municipal museum was opened in the stork park in 2000 to promote public awareness of the recovery progress
- More than 200,000 people annually visit on this museum

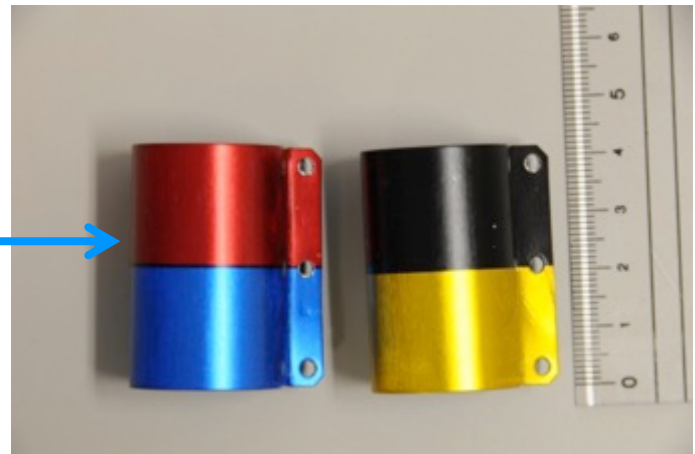
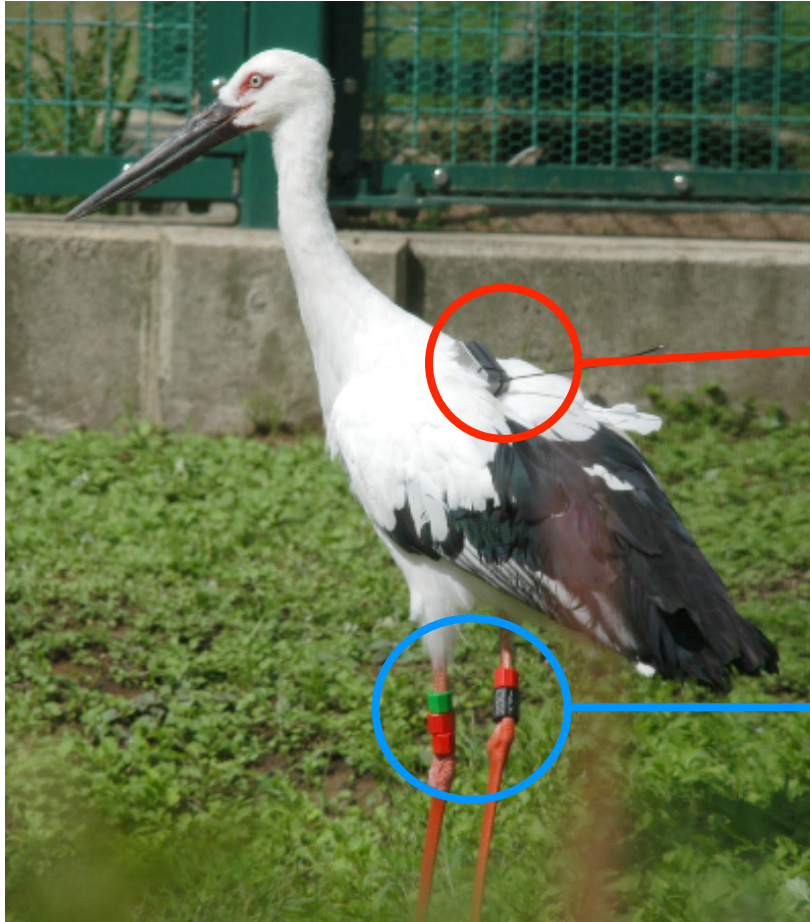


➤ Oriental White Stork reintroduction started at Toyooka city in 2005



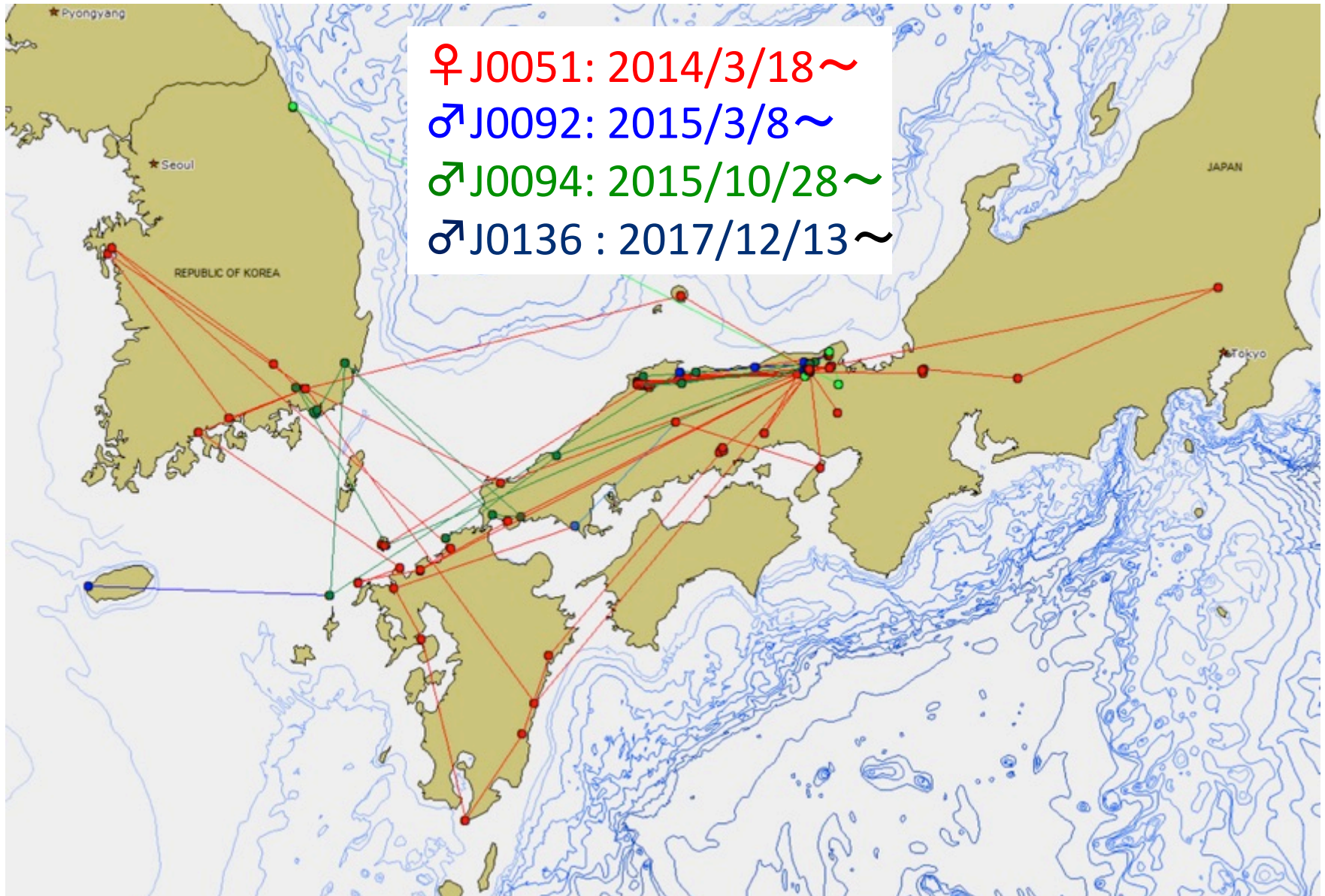


- Stork was marked with a unique color ring combination and GPS transmitter to study the movement and population dynamics





# Satellite tracking of the reintroduced storks



- Attract breeding storks to suitable sites by artificial nesting poles for a long-term breeding success
- Rescue from life-threatening situations (conspecific fighting, entanglement in agricultural netting)

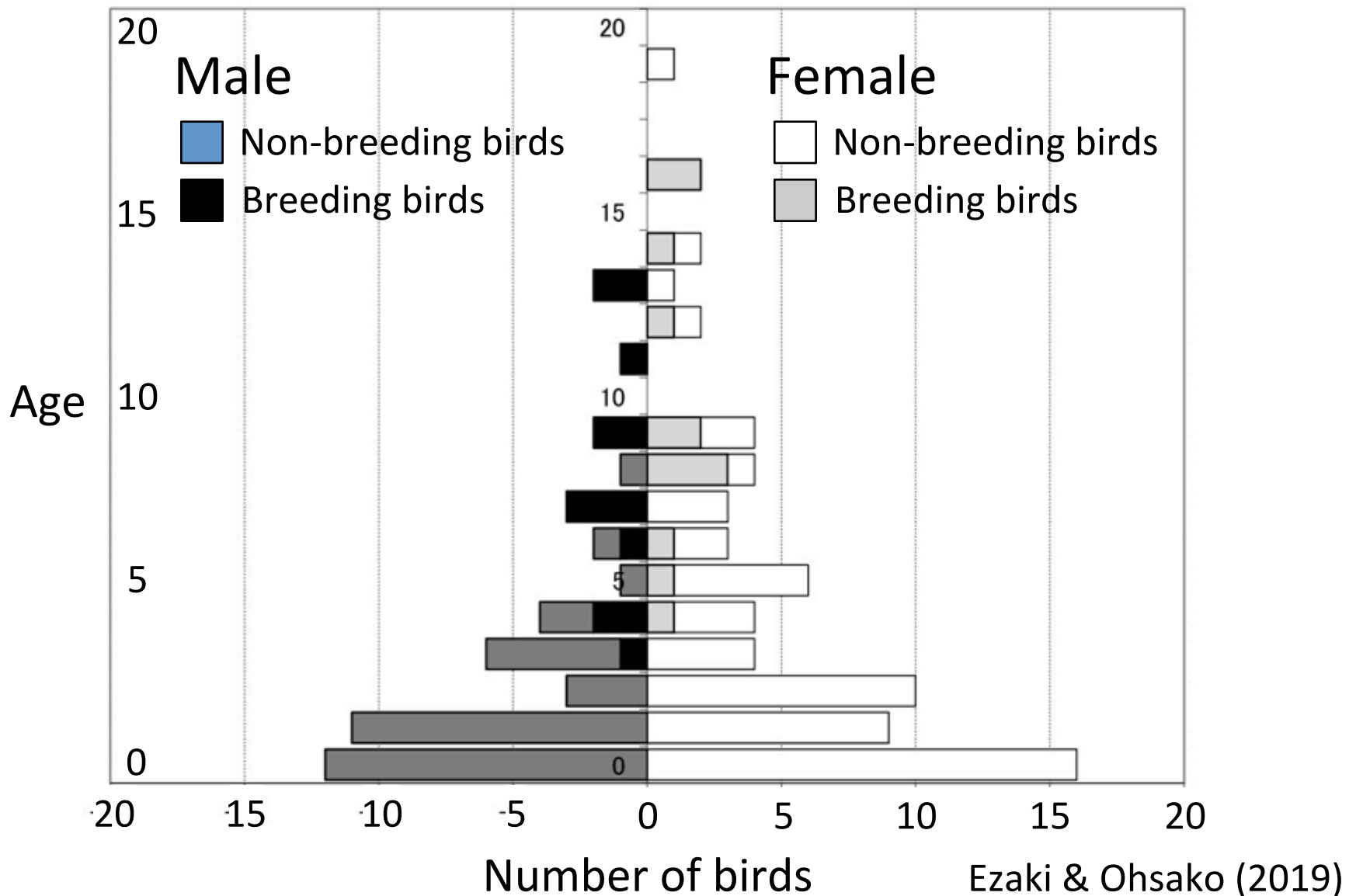




- Graduate school of Regional Resource Management, University of Hyogo was established in 2014 in the stork park
- Study the reintroduced stork ecology and promote the population persistence in human society



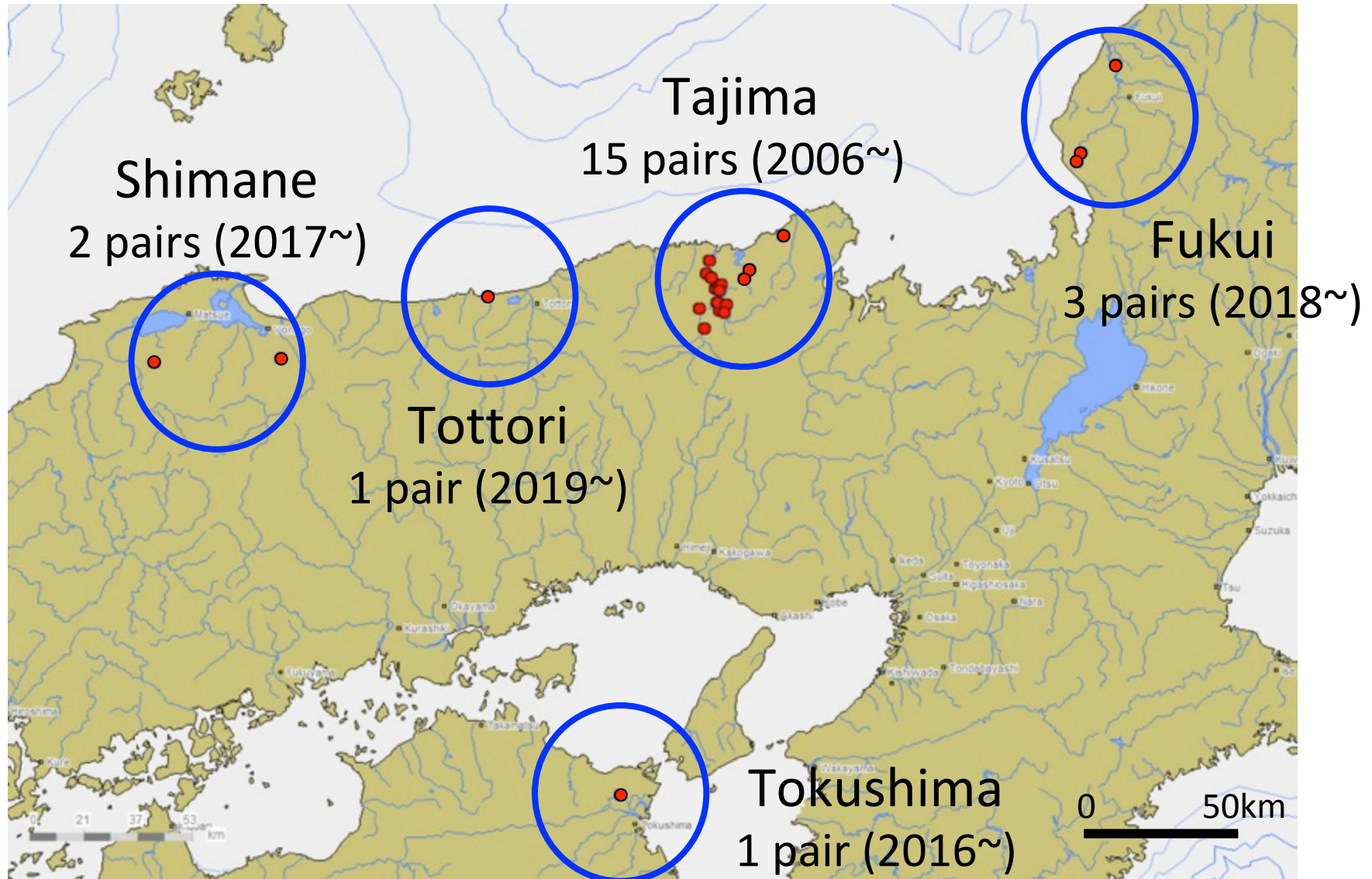
# Age structure of reintroduced population





# Distribution of wild-breeding areas

➤ Reintroduced storks bred at 22 sites in 2019



- Oriental White Stork is a big eater (daily amount of food: 500 g)
- Storks heavily depend on animals in wetlands including paddy fields for their diet



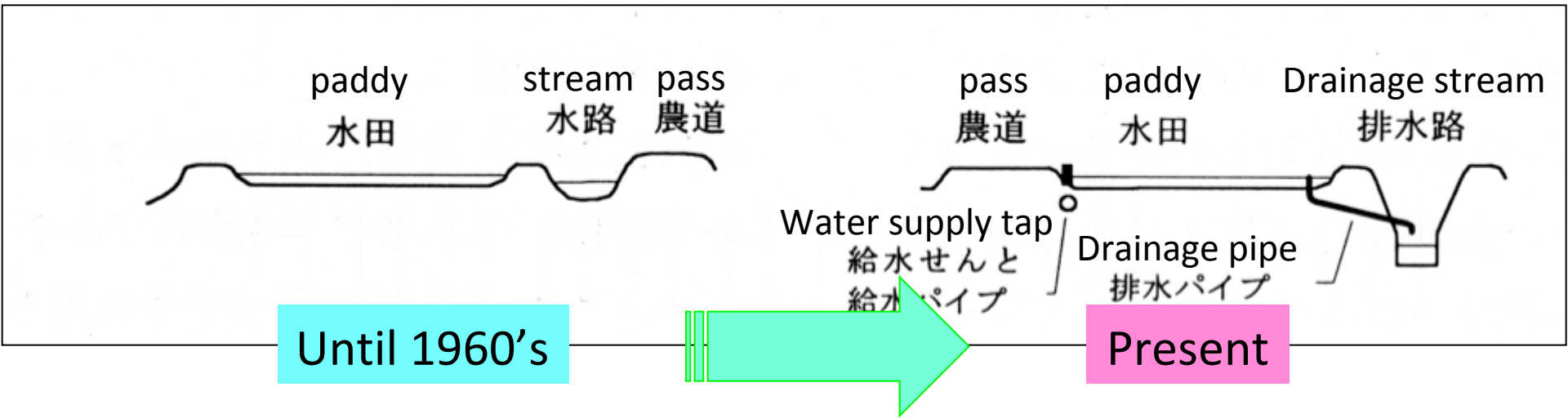


# Rural landscape in Tajima in 1960



➤ Food availability for storks is not high in the present paddy fields because of isolation from streams due to agricultural modernization

## Paddy Field and Surroundings



Access between paddy and stream for aquatic animals

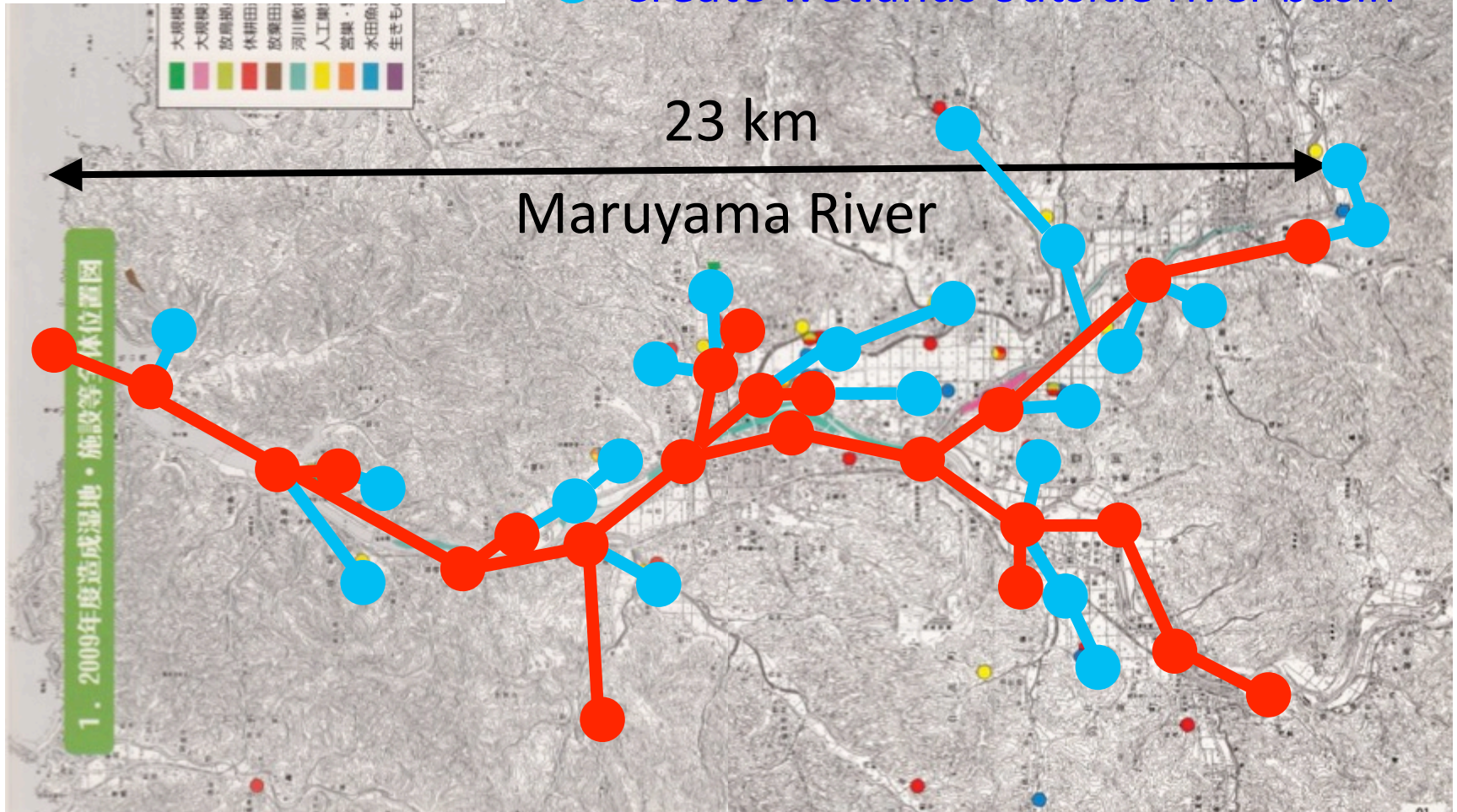
Easy	Difficult
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# Restoration of feeding grounds of storks

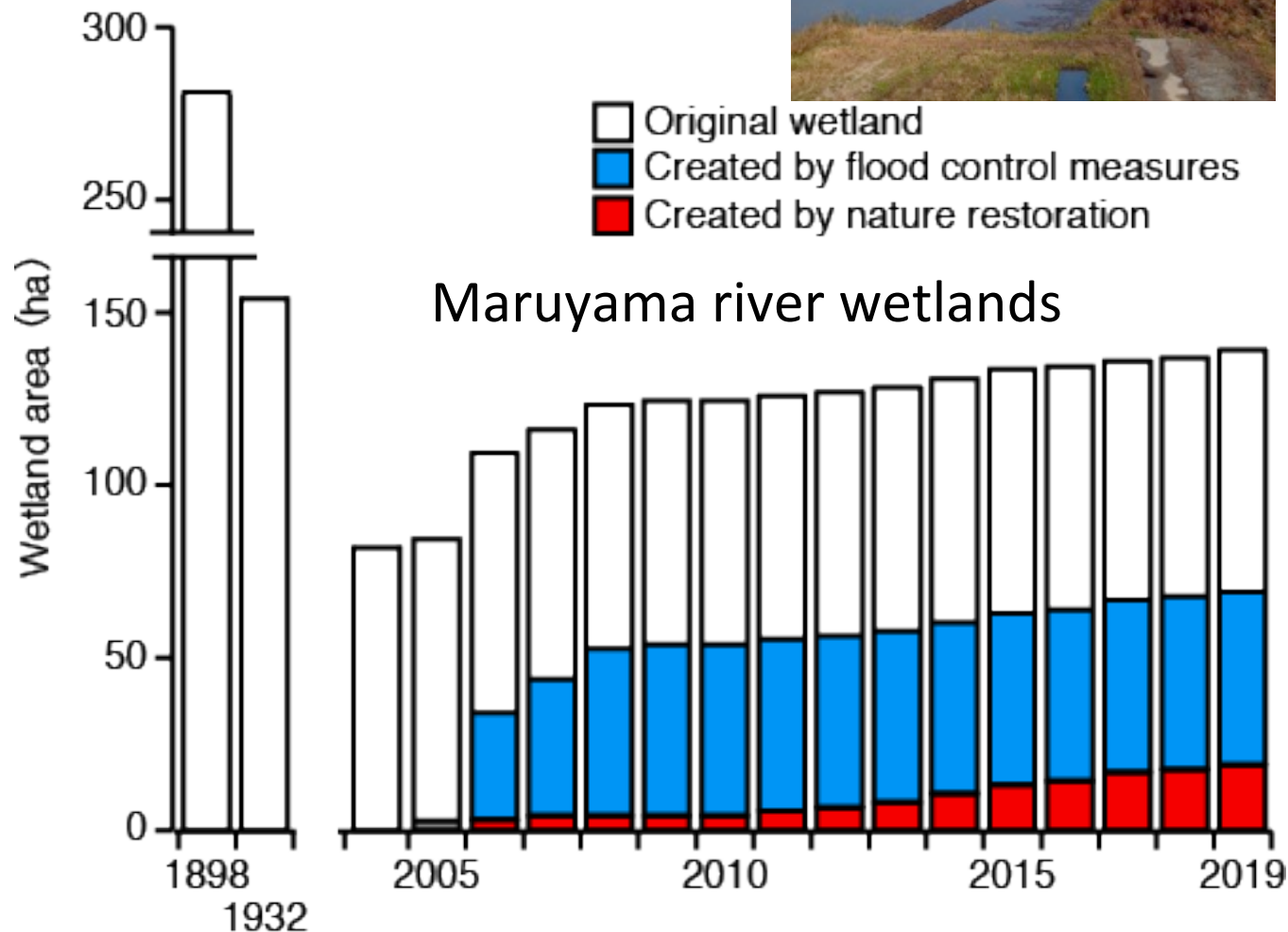
Toyooka city area

- Create wetlands inside river basin
- Create wetlands outside river basin



Map based on NPO-Shicchi-Net (2009)

# Restoration of feeding grounds of storks



Naito (2019)



- Fallow and abandoned paddies are used as the biotope for storks
- The biotopes are created at 26 sites in Toyooka





➤ Study the socio-historical relationships between people and storks

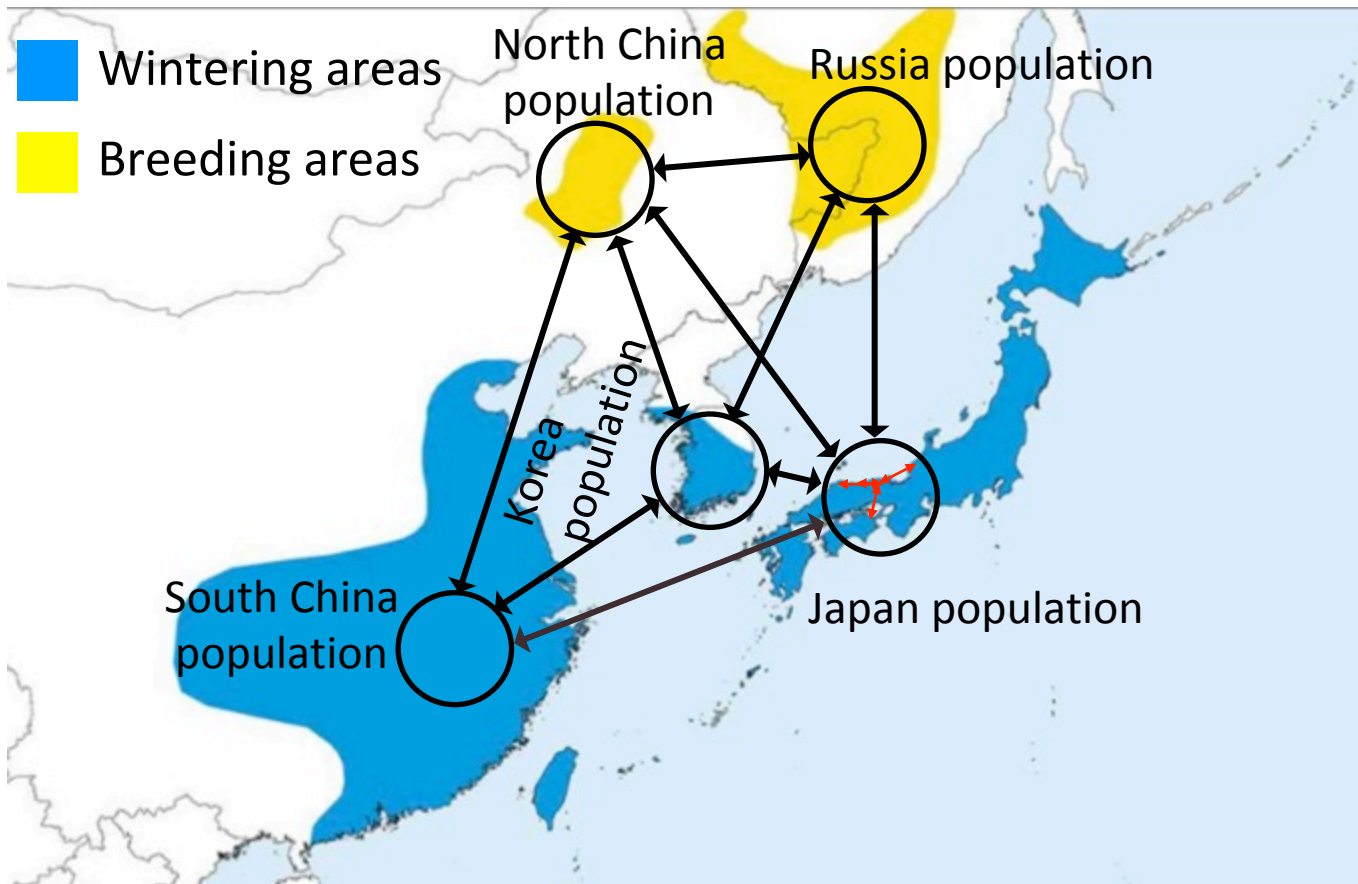


Postcard of breeding Oriental White Storks photo taken in 1911



# Goals of our restoration projects

- Restore the metapopulation structure of Oriental White Stork
- Create an environment where people can live with storks



# Thank you for your attention!



## つなげる つながる

Oriental White Stork

### 第三世代の誕生

日本で初めて野外に放たれた  
第一世代のコウノトリ。その孫にあたる  
第三世代のコウノトリが誕生しました。  
このうれしい姿を、  
未来の日本につなげてゆきたい。  
まずは、兵庫県・豊岡から...



#### コウノトリ野生復帰のこれから

2004年から始まったコウノトリの野生復帰。27羽の  
コウノトリが放たれ、豊岡で繁殖するようになりました。  
2011年に兵庫県は「コウノトリ野生復帰グランド  
デザイン」を策定しました。「豊岡のコウノトリの増殖」、  
「奈良盆地へ拡大」、「自らの繁殖」、「生息地の拡大」、  
「新たな地域での繁殖に向けた共同研究」などの4つの  
目標が定められました。兵庫県民の意識が次第に高まり  
鳥獣被害は年々減少し、鳥獣に近づいていくようになっています。

兵庫県立コウノトリの郷公園  
Hyogo Park of the Oriental White Stork



## 全国へ そして世界へ

### 野生復帰10年を越えて

コウノトリを再び大衆へへ。  
2004年から兵庫県・豊岡で始まった野生復帰。  
今では、兵庫県立の他、他県を中心に野生  
復帰が数箇所つつあります。  
コウノトリは、日本各地の大地を駆け、2014年  
には初めて宮城を越えて韓国へ渡りました。  
野生復帰の功績は今、全国へそして世界へと  
広がっています。

兵庫県立コウノトリの郷公園  
Hyogo Park of the Oriental White Stork