

Japan's Native Domestic Animals – A Living Cultural Heritage –

Alte Japanische Haustierrassen – ein lebendes Kulturerbe

Motofumi Tai², Jürgen Lange¹, Masaru Takada, Yoshihiro Hayashi &
Fumihito Akishinonomiya

¹Jürgen Lange (Past Director, Zoo Berlin), azc Aquarium Zoo Consulting Berlin – Tokyo

²Motofumi Tai, azc Aquarium Zoo Consulting Berlin – Tokyo

Abstract

The authors provide an overview of the history and current situation of traditional Japanese domestic animals. Most of the breeds were originally imported from abroad and kept and bred on the various Japanese Islands for specific purposes and uses, with too less exchanges of animals and breeding experiences in the past. Therefore, the geographical isolation from island to island led to the preservation of unique indigenous breeds. Very often, not only economic efficiency but the animal's beauty was the main purpose of breeding. In retrospect, all of these old breeds are not characterized by very high productivity levels and thus, no high economic value. However, they are good examples of being regarded as living cultural assets that have been inherited and therefore should be preserved for future generations. Through breeding and education programs, zoos can also make an important contribution to the preservation of these old, traditional livestock breeds.

Keywords: Asahiyama Zoo, Chabo, goldfish, Japanese cattle, Japanese chicken, Japanese dog, Japanese horse, Japanese pig, Japanese quail, Koi, Okinawa Zoo, Onaga-dori, Shiba-inu, Toyama Family Park.

Introduction

For zoologists, Japan is an interesting country, because many different endemic wild-ranging species or subspecies live on its various islands. Many local species originally came to

*Corresp. author:

E-Mail: azc-lange@gmx.de (Jürgen Lange)

northern Japan from north Eurasia and to southern Japan from the Philippines and Taiwan. Due to their long isolation in the Japanese archipelago, they have evolved and developed into new endemic species or subspecies. Good examples are the Japanese raccoon-dog (*Nyctereutes viverrinus*) with 2 subspecies in northern Japan or the Iriomote cat (*Prionailurus bengalensis iriomotensis*) and the Ryukyu Yellow-margined box-turtle (*Cuora flavomarginata evelynae*) in southern Japan. Not only these originally immigrated animals, but also the isolated survivors of a formerly widespread animal group can be found in some Japanese habitats today. Good examples in this case are the Amami rabbit (*Pentalagus furnessi*), which is closely related to the African Bushman hare (*Bunolagus monticularis*) and the Ryukyu Long-tailed tree rat (*Diplothrix legata*), which is the only surviving species of this genus (Lange & Tai, 2013, 2017).

Similar to wildlife species which are isolated on the various islands, domestic animals were introduced especially from Korea and China (Eppstein, 1969) and they were distributed by humans to different Japanese islands. As the islands are isolated, the domestic livestock animals were bred on each island with different goals, so today they represent different typical breeds, which are now endemic to each island and originally found only here.

This is the history of almost all existing Japanese livestock breeds (FAO, 2023). Only two Japanese wild animal species were domesticated in Japan, i.e. Japanese quail (*Coturnix japonica*) and Japanese Koi (colored carp; *Cyprinus carpio*).

Especially birds and fishes show a large diversity and adaptability for new breeding purposes, which ultimately serve as evidence of human cultural preferences. But despite all of these good breeding successes, animal welfare should remain the most important breeding goal. All the other domestic animals in Japan have been introduced from abroad over centuries from the north or the south, and have been kept and bred for different purposes with their cultural backgrounds (Shoda, 2006). Some of them are quite rare or unfortunately even extinct today. Here, we would like to introduce the country's domestic animals more generally by referring to a few good examples.

Japanese quail (*Coturnix japonica*)

The Japanese quail (Fig. 1) which is smaller than the European quail (*Coturnix coturnix*), is an endemic wild species in Japan. This quail has been kept and bred as a domestic animal until today. In the Meiji era, in around 1910, people kept this wild bird as a source of food and sometimes as a medicine for heart or lung diseases.

Especially their eggs were considered to be effective against such diseases. Even before the Meiji era, in the Edo period, the people enjoyed the birds' singing. Japanese quail is nowadays a useful breed and also a joyful and really popular bird, so people are competing over the decoration of their cages (Hubrecht & Kirkwood, 2010). As their breeding is still very popular, its wild descendant has been protected by law in Japan since 2013.

Koi (*Cyprinus carpio*)

Today, kois (Fig. 2) are kept by enthusiasts worldwide in their private tanks and garden ponds. But the domestication of kois started in Japan. Their different breeds, like the Japanese chicken breeds too, are a good example of how much Japanese people place more emphasis on beautify than on body size or economic efficiency or benefits when 'breeding their varieties'. Kois are one of the best examples of such a Japanese national trait, even if the probability of producing the appropriate color patterns is not so high.



Fig. 1: Japanese quail. All Photos: Motofumi Tai.



Fig. 2: Koi, colored carp.

Japanese Horse, “*uma*”

Horses have been kept all over Japan, with different breeds in each region from Hokkaido in the north to the Okinawa area in the south. However, there are still 8 Japanese horse breeds in Japan. Today they are used as tourist attraction such as horse riding for children, and also as animals for touch therapy, and not only for work. All the Japanese horse breeds, which Japanese people call “*uma*”, are smaller than most European breeds since originally the Japanese people were not so tall. Japanese horses have an average shoulder height of around 130cm. In the ancient times, however, warriors preferred more active and aggressive characteristics than just their running speed. In the beginning of the 5th century, the Emperor received the horse from Korea, which is considered to be the oldest description of horses in Japan. Currently an overall population of less than 2000 *uma* of the 8 breeds of Japanese horses exists (MAAF, 2022; FAO, 2023).

Kiso-*uma*

Kiso-*uma* (Fig. 3) is the only indigenous breed existing in Honshū, the main island of Japan. This breed is now kept in Nagano and Gifu prefectures, which are quite famous as good farming areas. Since ancient times, this breed was used as war cavalry. But once they almost faced extinction from crossbreeding. Fortunately, one Kiso-*uma* was found, kept as a sacred stallion in a shrine, as well as the Kiso-*uma* daughter. These both Kiso-*uma* saved this breed from extinction and nowadays 133 Kiso-*uma* exist (2022). The by far largest farm of Kiso-*uma* is in Kiso, Nagano prefecture, but a few Kiso-*uma* are also kept in Japanese zoos.



Fig. 3: Kiso-*uma* is the only indigenous horse breed in Honshū Island.

Yonaguni-uma, and horse racing in Okinawa

Yonaguni-uma (Fig. 4), a rather small type of breed, is kept on Yonaguni-jima Island in the southeast of Okinawa. Originally, they were used for cargo transportation, mainly rice and also sugar cane. At the same time, the horse was the only means of transportation on such a small island. In the old times, there were several more breeds in the Okinawa area, and each small island had its local breed. Traditional Okinawa horse racing took place on each island or region in Okinawa. In this contest, the horses competed not only in their running speed or time, but also in their beauty of running as well as in their decorations. Recently, Okinawa Zoo revived this horse racing on the zoo's premises.

However, today 110 Yonaguni-uma still exist in 2022.



Fig. 4: The small Yonaguni-uma is found in the Yonaguni Island, southeast of Okinawa.

Noma-uma

Noma-uma (Fig. 5) is kept in the Noma area of Iyo, now Ehime prefecture, on Shikoku Island. It is a quite small type of breed. The Lord of Iyo convinced his citizens to breed big horses for military and for the government (feudal clan) to purchase. The rest of the small horses were used in farming. This is the origin of this breed. The farmers used this horse for cargo transportation, mainly satsuma, Japanese orange, which is a very famous product in this area. Likewise Yonaguni-uma, these types of small horses can walk through the orange farm or windbreak of trees in Okinawa. This breed once declined to 5 Noma-uma, but has now increased to 48 Noma-uma (2022). Currently, a few zoos are also keeping this breed.



Fig. 5: The Noma-uma is bred in Shikoku Island.

Japanese Cattle, “gyu/ushi”

Nowadays many foreigners are familiar with branded beef names as “Kobe-beef” or “Matsuzaka-beef” as Japanese beef with more fat than normal cattle beef. These beef brands are from black haired cattle, called “*kuroge wagyu*” in Japanese. This *wagyu* is kept all over Japan and each region has a different brand name such as Kobe beef from Hyogo prefecture or Matsuzaka beef from Mie prefecture. The origin of *wagyu* is in Japan with just 2 breeds. Since the 6th century, the Japanese people started to keep and breed Japanese cattle, which were originally imported from the Korean peninsula.

But because of buddhism, which was introduced to Japan in 676 CE, the Emperor decided to prohibit the use of meat and milk deriving from cattle. Since then, Japanese people used cattle only for labor and transportation in farming and harvestings.

Today, less than 100 Japanese cattle are being kept in Kagoshima prefecture and also in Yamaguchi prefecture.

Kuchinoshima-gyu, the only feral cattle in Japan

Kuchinoshima-gyu (Fig. 6) is the only feral cattle in Japan. They are living on Kuchinoshima island of Kagoshima prefecture. This cattle breed was originally brought to this island in 1918. Some individuals escaped and became “wild” cattle again. Due to this isolation they have preserved their original characteristics.

Primarily their hair is almost black, but some of them have white spots, too. This variety of spotted cattle is used more for celebrations and other similar occasions. Since they are used more as working cattle, their hind legs are rather poorly developed. Their meat is lean and contains no fat in between their muscles. Nowadays, it is estimated that 30-100 animals still live on the islands in protected areas and a few Kuchinoshima-gyu are kept in zoos and universities too (Akishinomya & Komiya, 2009).



Fig. 6: The Kuchinoshima-gyu, found in Kagoshima prefecture, is the only feral cattle in Japan.

Mishima-ushi

Mishima-ushi (picture 07) is also only kept on the isolated small island of Mishima in Yamaguchi prefecture. They are quite small and have black, rather brownish hair. This is the original characteristics of Japanese cattle. And it is the reason for them and their habitat to be designated a Natural Monument of Japan in 1928. They are mainly used for working in farming, and sometimes exported to Honshū, the main island. Once they had decreased to around 30 Mishima-ushi, but the Mishima-ushi Conservation Society was established in 1967 and today 80 Mishima-ushi are kept on the island (FAO, 2023). Their meat is quite lean with muscle fibers that may contain fat, which is later refined into the famous Wagyu.



Fig. 7: The Mishima-ushi is only kept on the small Mishima Island in the Yamaguchi Prefecture.

Japanese pig

From the Jomon period (c.14000-300 BCE), Japanese people exploited wild boar. This is well known from bones excavated from several ruins throughout Japan. Since after the Yayoi period (c.300 BCE - c.250 BCE), domestic pigs, which were introduced from the Korean peninsula, became more popular in Japan. However, pigs were no longer kept after the Emperor decided in 675 CE to prohibit slaughtering animals. Only a few remote islands like Okinawa not directly affected by this order. Therefore, only in Ryukyu, now Okinawa prefecture, and the Southwest Islands, people never stopped keeping pigs. Today only one breed continues to be preserved in Okinawa as an indigenous Japanese livestock, which is probably better be described as Okinawan native livestock (Akishinomya & Komiya, 2009).

Japanese pig “Shima-wa:” in Okinawa

In the 14th century, rather small bodied black pigs with hanging bellies and sunken backs were introduced from China to the Southwestern Islands of Japan. After the Meiji era, several breeds from Europe were crossbred with the traditional breed, so that the genuine breed was almost extinct (Akishinomya & Komiya, 2009). However, few pigs with original traits of this breed were rediscovered in Okinawa and other small islands. These helped to revive the original Japa-

nese/Okinawa livestock pig, named “Shima-wa:” (Fig. 8). This Shima-wa: has recently become quite famous as a pork brand. But the pigs are rather difficult to keep, because they require more time to grow up than mixed breeds. This means their husbandry and breeding cost more time and money, which forms a threat for the continuous keeping of this breed (Akishinomya & Komiya, 2009).

All other ungulate breeds, which are kept today in Japan, are imported from abroad and have never been transformed into a typical Japanese breed.



Fig. 8: The Shima-wa: in Okinawa is the only indigenous Japanese pig breed.

Japanese dog

Since more than 10,000 years ago, dogs have been kept by people who lived in Japan. It is obvious that dogs are very important as helpers for hunting in the Jomon period, as well as guard dogs and as companions today. On the other hand, people also appear to have eaten dog meat, since the Yayoi period, because the bones excavated from the ruins from that period are very fragmented. This indicates that the behavior and diet of Japanese people have changed during the course of the Yayoi era.

As the Japanese archipelago is quite isolated from other countries, and even regions inside the country are also quite isolated from each other, dogs were kept genuine, for a long period of time. But after the Meiji era, so many other European breeds were imported. Until today, 6 Japanese dog breeds are designated as National treasure, and some other breeds like the *Daito-ken*, *Kawakami-ken* and *Ryukyu-ken* are definitely Japanese breeds, too, but not yet registered as National Treasure (Akishinomya & Komiya, 2009).

Shiba-inu & Ryukyu-ken

Shiba-inu (Fig. 9) is the generic name for all small Japanese dog breeds. Originally this breed helped hunting for hares and pheasants, and some other small wild animals. Their bones have

been found in ruins of the Jomon period, and these bones are quite similar to this breed. Up to date there are several types of *Shiba-inu* in each different region, which are kept and preserved by each society. *Shiba-inu* is the most popular and famous breed among Japanese dogs.



Fig. 9: Shiba-inu, a Japanese native breed of dog designated as a natural monument.

Ryukyu-ken (Fig. 10) is a quite unique dog breed in Okinawa. It can be said that this dog breed is genetically closely related to Hokkaido-inu which is mainly kept in the northern part of Japan. Due to the migration of people, dogs are also moving together with them. Ryukyu-ken has a very special type of speckled hair like the tiger (Akishinomya & Komiya, 2009).



Fig. 10: The Ryukyu-ken in Okinawa prefecture.

Japanese Chicken

The oldest bones of Japanese chicken were found in Japan at the Karakami ruins in Nagasaki prefecture. These bones date back to more than 2000 years ago. It was around that time that the Japanese started to keep chickens. Similar to the history of cattle, the consumption of chicken meat was prohibited in Japan. Therefore roosters were mainly serving as clocks for telling time, and sometimes for cockfighting, or for foretelling. Later, in the Edo period, Japanese people slowly started to breed chickens, not only to eat their meat or collect their eggs, but also to compete with their beauty, their long breath singing, and also to enjoy their appearances.

But even worldwide, the main breeding purpose was always the appearance of chickens, and not the quality of meat or the number of eggs. Only in the 20th century, economic aspects came to the fore in chicken breeding (Herre & Röhrs, 1990). It is rather difficult to define the correct number of chicken breeds because the breeding of varieties for improvements by humans is quite diverse. However, it is estimated that more than 200 different breeds are kept worldwide and 38 old, traditional breeds still exist in Japan (Tsudzuki, 2003a). 17 of these breeds are designated Natural Monuments (Figs 11-13) (Tsudzuki, 2003b). Shoda (2006) listed worldwide 177 remarkable chicken breeds, including 26 Japanese breeds.



Fig. 11: Chān, the long-crowing chicken, native to Okinawa prefecture.



Fig. 12: Toumaru, the long-crowing chicken native to Niigata prefecture, and designated as a natural monument of Japan by the Japanese government.



Fig. 13: Ukokkei, Japanese Silkie, designated as a natural monument.



Fig. 14: Onaga-dori, Japanese Long Tail Chicken, designated as a special natural monument.

Onaga-dori

Onaga-dori (Fig. 14) is the breed with “the longest tail feathers in the bird world”. Originally, they were selected as a type that does not moult tail feathers. The way of breeding this chicken was well guarded secret in Tosa, now Kochi prefecture, until the end of the Edo era. The Lord of Tosa used these very long tail feathers as his symbol especially during the regular parade to Edo, now Tokyo. Anyone unfamiliar with this chicken would be quite amazed and amused by its beautiful feathers. In the 1830s, its longest tail was 3 meters long, and later on after World War II, its tail grew longer up to 13.5 meters, which is still the longest record to date. In 1923 this chicken breed was designated as a Special Natural Monument and since 1952 it is listed in the “Act on Protection of Cultural Properties”, which passed as law number 214 in 1950.

Chabo

In Japan, this chicken breed was probably named after the Champa Kingdom. At the beginning of the Edo period around 1600, Chabo was possibly introduced from China. This breed was named in Japan after its place of origin, which is considered to be “Champa Kingdom” in the middle of South Vietnam. People in the Edo period were enthusiastic about this breed, and kept and improved it, resulting in several different plumage colors and sizes. Some Chabo were even exported from Japan in the Edo era from Nagasaki Port. That is the reason why some people still call this Chabo “Nagasaki” or a Japanese Bantam.

There are numerous fan clubs and societies all over the world in favor of this Japanese chicken breed. There are 25 different varieties of Chabo today (Fig. 15) (Akishinonomya & Komiya, 2009).



Fig. 15: The Uzura, one of the Chabo breeds, designated as a natural monument.

Japanese domestic fishes

We could never overlook domestic fishes in Japan. Especially Koi, colored carp, are among the most expensive and valuable pets in the world, and also Kingyo, goldfish, are also quite popular among people. Originally Koi and also Kingyo (Fig. 16) were kept as companions in the middle of the Edo period. Koi were especially for the lord or higher classed people of respective region, while Kingyo was more for ordinary people (Roos, 2019). At the same time, Japanese Ricefish (*Oryzias latipes*) was fancied by the Japanese people as well.



Fig. 16: Kingyo, the goldfish is popular all over the world.

Koi, colored carp, and Kingyo, goldfish

Koi was created from carp (*Cyprinus carpio*) more than 200 years ago in Echigo, today's Niigata prefecture, just by mutation. People then began to breed them, so that today there are 80 different varieties. In 1914, the "Tokyo Taisho Exposition" was held in Tokyo and this EXPO made this fish very famous and popular.

During World War II, many varieties of Koi were lost, but the 'breeding of varieties' started again after World War II on the basis of a few parental fishes that survived and in the 1960s a big boom in breeding of Koi started. Nowadays, there are a lot of enthusiasts of this "swimming art". Only 0.5% from competing fishes have the quality to be used as future breeders. But under good conditions they could be kept for more than 30 years and a few could become even live to 100 years or longer. This is another reason why these fish are beloved by many people.

Kingyo was originally created in China from the Chinese crucian carp (*Carassius auratus*) which is its wild ancestor (Kijima et al., 2008; Wang et al., 2014; Wang et al., 2013). It is said that in 1502, Kingyo was introduced to Osaka from China. And then during the Edo period, a lot of different varieties were bred and now up to 200 of Kingyo varieties are known all over the world. This is probably because they are easier to keep than Koi.

The Role of Zoos in Japan

There are a few zoos in Japan which try to conserve such native domestic animal breeds. They focus more on the education of local citizens than on touristic visitors. Their collections of rare or old breeds are quite well maintained at this moment, but this engagement depends mainly on the director's or staff members' interest. There is a constant concern that such a concentration on the husbandry of domestic animal breeds will diminish or even cease, if there is a change in staff, the director or even the head of the municipality responsible for the zoos. Therefore, it is important to educate zoo staff as well as the officials working for the municipality, about the husbandry of old traditional livestock breeds as a cultural inheritance project and the role zoos can play in this. It can be said that zoos should furthermore add the husbandry and conservation of endangered domestic breeds to their goals and code of ethics to assure the survival of these breeds also for future generations.

In this context, in Germany the German Federal Ministry of Food and Agriculture financed a project to increase the overall contribution of zoos for the conservation of endangered livestock breeds (Kögler, 2021; Kögler et al., 2022).

Toyama municipal family park zoo

This zoo on Honshū island has a rich collection of native chickens, with more than 20 breeds. All of these breeds are well segregated in a different cage, and all with detailed information labels. Even though there are no real local domestic breeds in Toyama, the collection is remarkable. Besides the collection of chickens, there is a carriage inside the zoo which is pulled by Banba of Hokkaido, the heavy breed for sleigh races, bred from European cold blood horses in Japan (Fig. 17).



Fig. 17: Banba horserace on the racecourse in Obihiro, Hokkaido.

Okinawa Zoo

Okinawa Zoo in Okinawa prefecture is considered as a success in reviving the traditional Okinawa horseraces by the staff members of this zoo (Fig. 18). They are using horses that are kept at this zoo, in cooperation with many citizens who still know the original race, which had no longer been held since before World War II. Their cattle breed Kuchino-shima-gyu is used for rice planting, and the Yonaguni-uma is carrying food for the animals inside the zoo. The zoo's unique collections express the diversity and cultural background of these local breeds.



Fig. 18: Okinawa Zoo revives and organizes traditional Ryukyu (Okinawa) horseraces with Yonaguni-uma and in traditional costumes.

Asahiyama Zoo

Also, the Asahiyama Zoo in Hokkaido has a good exhibition of domestic animal breeds. Following their concept “what we tell is about lives”, they try to explain and to demonstrate the origin and process of domestication from their wild ancestors. This zoo does not keep extraordinary breeds, but keeps more common imported breeds of chickens, ducks, pigs and goats. Their exhibition of domestic breeds, using several information boards (Fig. 19) hand-made by their staff, is very educational and informative for visitors.



Fig. 19: Asahi-yama Zoo: Simple, but informative labels about domestication.

The Society for Livestock Studies

The “Illustrated Encyclopedia of European Poultry” was published by Fumihito Akishinomiya et al. 1994. Even before this publication, The Society for Livestock Studies has started their activity mainly with chickens (Mohri, 2019). Today, however, the Society’s field of activity includes more livestock breeds and themes in general. It started with the surveys of actual sites as well as molecular phylogenetic studies, and today the Society is trying to elucidate the whole process of domestication (Fig. 20).

The Society is also researching the culture and history of living organisms based on the fact that domestic animals were created through interactions with humans. As genetic evidence disappears over time due to the needs for improvements, the Society focuses on natural history materials, such as taxidermies, skeletal specimens, video/photo materials and also on DNA preservation.

Conclusion

In general, there are not a larger number of breeds and varieties of old Japanese domestic breeds. Especially chickens represent an interesting diversity (Akishinomiya & Komiya, 2009), and the numbers of Japanese breeds represent about 10% of all worldwide chicken breeds. A few of the breeds were introduced in Japan, and some of them are quite rare and extremely



Fig. 20: The Members of the Society for Livestock Studies have close contact to all breeders of old livestock breeds and visit often also their breeding facilities.

valuable cultural assets. Nevertheless, it is quite difficult to successfully keep even those characteristic, very precious breeds, because most of them are not so easy to breed and have definitely no economic or commercial value.

This is the reason why farmers do not want to keep such breeds.

Furthermore, the Japanese government definitely does not provide enough support for private efforts to conserve local breeds. A few breeds are kept in some local zoos or touristic farms, but the majority is threatened in their persistence by low numbers of individuals and holders. The Society for Livestock Studies is working well in some cases, but no one can tell how long this will last. And we must emphasize that it is not enough just to conserve or preserve them, but it is more important to appreciate their real value and hopefully to use them. From that point of view, the biggest issue of Japanese livestock is to find a way of to preserve them for the future as “Living Cultural Heritage”.

The husbandry of domestic livestock in Japan is rather different to the European style. Originally, domestic animals in Japan are mainly used as gift to the god and also as working animals. Therefore Japanese never operated big farms for livestock animals. It was more a cottage industry, which had of course also less input on nature than any factory farming. Further-on, all the domestic animals were well incorporated into the life system of Japanese people. The breeds became resistant to a harsh environment and developed strong self-activities to survive, but by breeding management they should not become “wild animals” again. Such a system is of course difficult to maintain in a society that emphasizes economic values and efficiency.

On the other hand, with population growth, energy and food shortage and climate change diversity of livestock becomes more important than efficiency-oriented uniformity and identity. Livestock, created by selection pressure that matches the nature and the folk customs of a region, have the ability to breed and survive in harsh conditions which we could imagine for

the near future. For this reason, it is important to maintain the old traditional Japanese breeds as livestock that can be expected to have the ability to respond and adapt, when environmental changes occur.

Therefore it is high time and almost last minute to protect the diversity of these native domestic breeds in Japan. We should never underestimate their biological value and cultural worth. It is pity that other problems like diseases and climate changes have much higher priority for the government and that the conservation of these old traditional livestock breeds depends mainly on private initiatives.

Epilogue

Many Japanese art masters have painted and sculptured a variety of domestic animals. All these artworks tell us the shape and appearance of them even after several hundreds of years. In fact, those art pieces helped to revive some of the extinct breeds, and now such a re-breeding project is taking place in the Amami Islands in Kagoshima prefecture. In 2022, the Amami native domestic chickens as well as the rare Amami pigs were found on the islands. It is encouraging to see that projects have been started to keep, breed and multiply them with the cooperation of local people on Amami (Fig. 21). It will be interesting to see the outcome and result of this project in a few years.



Fig. 21: The Teiryā-duri chicken on Amami Islands is one of the projects to revive this old, traditional breed and to preserve it for future generations.

Zusammenfassung

Es wird ein Überblick über die wichtigsten alten japanischen Haustierrassen gegeben, die bis auf die Japanische Wachtel und den Koi-Karpfen, die in Japan aus Wildtieren domestiziert wurden, ursprünglich alle nach Japan importiert und hier – isoliert auf den verschiedenen Inseln – zu typisch japanischen Haustierrassen weitergezüchtet wurden. Manche von ihnen sind heute selten und als wertvolle Kulturgüter hochgeschätzt.

Dennoch ist ihr Bestand gefährdet, da sie schwieriger als die modernen Haustierrassen zu züchten sind und momentan keinen großen wirtschaftlichen, kommerziellen Wert haben.

Einige wenige Rassen werden in Zoos oder auf touristischen Bauernhöfen gehalten, die meisten Rassen sind jedoch durch die geringe Anzahl an Individuen und privaten Besitzern in ihrem Fortbestand bedroht. Die japanische „Society for Livestock Studies“ versucht deshalb, die alten Haustierrassen als „lebendiges Kulturerbe“ für die Zukunft zu bewahren, zumal sich diese alten Rassen häufig besser an sich verändernde Umwelteinflüsse anpassen als die modernen Haustierrassen und deshalb in der Viehwirtschaft der Zukunft eine durchaus wichtige Rolle spielen können.

References

- Akishinomiya, F., Kakizawa, R., K., Roberts, M., & Roberts, V. (1994). *Illustrated encyclopedia of European poultry*. Tokyo
- Akishinomiya, F., & Komiya, T. (2009). *Livestock and poultry in Japan*. Tokyo: Gakken.
- Eppstein, H. (1969). *Domestic animals of China*. London: Commonwealth Agricultural Bureaux.
- FAO (2023). *Domestic animal diversity information system (DAD-IS)*.
- Herre, W., & Röhrs, M. (1990): *Haustiere – zoologisch gesehen*. Stuttgart & New York: Gustav Fischer.
- Hubrecht, R., & Kirkwood, J. (2010): *The UFAW handbook on the care and management of laboratory and other research animals*. Hoboken: John Wiley & Sons.
- Kijima, T., Futami, K., Katabami, M., Yamane, M., Wang, Y., Huang, J., Ozaki, A., Sakamoto, T., & Okamoto, N. (2008). Mitochondrial D-loop DNA analysis of Chinese crucian carp reveals the maternal origin of goldfish. *Fish Genetics and Breeding Science* 38, 97-103.
- Kögler, J. (2021). Bestandsmonitoring einheimischer Nutztierarten in Zoologischen Gärten als Basis für eine ex-situ in-vivo Erhaltungsstrategie. *Zoologischer Garten*, 89, 57-66.
- Kögler, J., Büttner, S., & Frölich, K. (2022). Message in a suitcase. *Zooquaria*, 115 (26).
- Lange, J., & Tai, M. (2013). Hokkaido – Wilde Natur im Nordosten Japans. *Bongo*, 44, 157-182.
- Lange, J., & Tai, M. (2017). Beobachtung seltener, endemischer Tierarten im äußersten Süden Japans. *Takin*, 26 (2), 46-50.
- MAFF – Ministry of Agriculture, Forestry and Fisheries (2023). Official Website (https://www.maff.go.jp/j/chikusan/kikaku/tikusan_sogo/sonota.html#uma).
- Mohri, H. (2019). *Imperial Biologists: The imperial family of Japan and their contributions to biological research*. Springer Biographies.
- Roos, A.M. (2019). *Goldfish*. London: Reaction Books Ltd..
- Shoda, Y. (2006). *World farm animal breed encyclopedia*. Tokyo: Toyo Publisher.
- Tsudzuki, M. (2003a). Japanese native chickens. In: *The relationship between indigenous animals and humans in APEC region* (Eds Chang, H.L. & Huang, Y.C.). The Chinese Society of Animal Science, Taiwan, Tainan, 91-116.
- Tsudzuki, M. (2003b). Chicken breeds designated as “Natural Monument of Japan”. *Hiroshima University, Research Now*, Edition 27 (www.hiroshima-u.ac.jp)
- Wang, J., Liu, S., Xiao, J., & Tao, M. (2014). Evidence for the evolutionary origin of goldfish derived from the distant crossing of red crucian carp × common carp. *BMC Genetics* 15, 33.
- Wang, S-Y., Luo, J., Murphy, R.W., Wu, S-F., Zhu, C.-L., Gao, Y., & Zhang, Y.-P. (2013). Origin of chinese goldfish and sequential loss of genetic diversity accompanies new breeds. *PLoS ONE* 8(3): e59571. Doi:10.1371/journal.