Can you help to save Reeves's Pheasant?

The Red List status of Reeves's Pheasant was raised recently because the wild population has decreased immensely in recent years.

The central tail feathers of this species can grow to more than 2 metres, the longest feather of any bird species.

For many years, these tail feathers have been used by Beijing Opera companies and other cultural shows, as shown in this photo. Traditionally, these feathers have come from wild birds, so large numbers of male Reeves's have probably been killed to provide their long tail feathers. Since one male Reeves's Pheasant can often mate successfully with a number of females, the loss of some wild males to provide cultural feathers may not have diminished the population too significantly.

However, in more recent years, there has been a very considerable increase in the demand for Reeves's tail feathers, particularly for the very elaborate costumes used for events such as the Carnival in Rio. A number of countries stage similar carnivals and, as the demand for the long tail feathers of several pheasant species has increased, the wild population of Reeves's Pheasants has crashed.

There have been reports that artificial feathers are now being used, but a search on the internet soon shows that large numbers of natural feathers are still being advertised for sale, although the price has increased considerably in recent years.

Many WPA members will know of Prof Wang Nan and his amazing research into the unusual relationship between white eared-pheasants and Buddhist monks in western China. Wang Nan is now working with colleagues at Beijing Forestry University to try to determine whether the Reeves's Pheasant tail feathers that are use for cultural purposes originate from wild birds or from those bred specially in captivity.

This research team has found that the DNA taken from feathers of wild birds seems to be significantly different to that from a small number of captive birds that they have sampled. It is likely that wild birds have a very varied diet compared with the birds raised in captivity. So the research team has asked if WPA members and any other colleagues who keep this species in captivity can provide feather samples to assist their research to allow them to identify the origin of the feathers that are used culturally.

How to take feather samples

Many WPA members may already be accustomed to taking feather samples for DNA testing of tragopans. The most important thing it to ensure that your fingers do not touch the part of the feather that will be used for the research because this will contaminate the pheasant DNA with your human DNA.

The sample that will give the best opportunity to provide good quality DNA is from the quill end of the feather which has been freshly plucked from the bird. Freshly plucked feathers usually have a minute amount of blood from which DNA can be easily extracted. Probably the easiest place to take this feather sample is from one of the middle feathers in the wing. These re-grow very rapidly.

We should stress here that there is no need to consider removing the long tail feathers. Also, feather samples from both males and females are very acceptable.

We have found that these feather samples remain viable for some time if they are placed in a paper envelope first and then put into a plastic zipped bag afterwards.

For DNA testing, only about 6 –8 cm of the quill end needs to go into the envelope. It is suggested that you write the details about your pheasant sample on the envelope before putting the quill end inside.

So the procedure is:

1. If possible, put on some plastic gloves so that your DNA does not contaminate the feather sample. Have a sharp pair of scissors and a paper envelope ready.
2. After catching the bird, hold a feather from the middle area of the wing with one hand and support the skin around the base of the feather with the other hand. (This can be a lot easier if you have someone to help by holding the bird whilst you extract the feather.
3. Grasp the feather about halfway up and pull quickly whilst supporting the skin around the base of the feather.
4. Release the bird and take the feather to the paper envelope.
5. If you can get someone to hold the envelope open without touching the inside, then cut the feather about 6–8 cm from the quill end whilst holding it over the open envelope and without touching any part of the feather that will go for DNA testing.
6. On the envelope, please write your name, the sex of the bird and whether it is a captive bird or has spent time free-roaming. If you are comfortable in doing so, please also put your email address so that Wang Nan could contact you if he has any further questions. None of your information will be published in this research.
7. Finally, put the paper envelope inside a resealable plastic bag and then get the sample to Stewart Henderson, Barbara Ingman, John Corder or anyone who will attend the WPA meeting in Cleres in the middle of April.

We are very aware that some Reeves's Pheasants can be quite aggressive or difficult to handle easily. If this is the case, Wang Nan might still be able to extract the required DNA from the end of a clean feather at the opposite end to the quill. If you can manage this, please store the sample in the same way as described previously.

Finally, if you are able to collect feather samples from any Reeves's Pheasants that have lived a wild existence, it would be really helpful to compare their DNA with birds that live in the wild in China. We know that there are some Reeves's that have lived in the wild for several generations, particularly in France and in the Czech Republic. There may also be birds that have been released on shoots and therefore lived on a wild diet, and it would be really helpful to examine and compare their DNA.

We really hope that this research will allow the research team to identify whether Reeve's Pheasant tail feathers that are used culturally originate from wild or captive birds.

Thank you for any help you are able to give to save this species in the wild in China.