Press release: Fish stocks boost for endangered pearl mussel

Thousands of sea trout have been released into rivers in Northumberland to stock rivers for anglers and help protect the future of a critically endangered species, the freshwater pearl mussel.

Pearl fishing and water pollution from industry have led to worldwide decline of the pearl mussel.

A healthy population of endangered freshwater pearl mussels is important for water quality — each mussel filters 50 to 70 litres of water. They improve the quality of the habitat, increasing the ecological diversity, which includes juvenile trout and salmon numbers.

The Environment Agency's Kielder Salmon Centre staff Richard Bond and Jess Anson have developed a technique to enable pearl mussel larvae to attach to the fish gills, replicating their natural life cycle in the wild.

The larvae will drop off the sea trout gills towards the end of May where they will settle on to the river bed. Given the right conditions, these juveniles could survive into adulthood and live for up to 100 years.



Close up of pearl mussel larvae (white dots) attached to the sea trout gills

Around 12,000 one-year-old sea trout, which have been bred at Kielder Salmon

Centre, were released this week into North Tyne tributaries of the River Tyne.

The larvae attached to them were harvested from 80 adult mussels which are cared for at the centre.

Kielder Salmon Centre breeds 360,000 salmon and between 10,000 and 20,000 sea trout every year to stock rivers.

Complex life cycle

Richard said:

The pearl mussel has a complex life cycle which begins as larvae. These larvae, called glochidia, requires salmon or sea trout to host them for the first stage of their development.

They attach to the gills of trout in the River Tyne between late July and early August, where they remain until the following spring when they drop off the fish's gills. They need clean water and gravel, and well oxygenated water where they continue to grow.

The survival rate for juveniles has declined over the years, which has led to an ageing population, with few mussels under 50 years old.

This means they are a critically endangered species with only around 30,000 adult mussels in the wild in the North Tyne area, and 500,000 across the country.

This work at the hatchery is to try to increase the numbers of juveniles in the river, boost future numbers, natural reproduction and survival rates in efforts to halt the population decline.



Water quality improvements

After considerable investment, water quality has improved dramatically across the UK and rivers in England are the healthiest they have been for 20 years.

The improvements in water quality of the River Tyne and its tributaries has been excellent, and along with the continued work of the Environment Agency and partners, has resulted in improved conditions for natural breeding in the rivers, and a flourishing ecology.

Kielder Salmon Centre pearl mussel project

Richard added:

In 2010 we first managed to successfully get freshwater pearl mussel larvae to attach to the gills of sea trout. Since then we have released sea trout every spring to the River Tyne tributaries.

Over the next two years we will be carrying out surveys, looking for the first of these juvenile mussels that were released to see if or where they have survived.

Even at 7 years old they will be less then 3cms long, most of which will be buried under the river bed. In another 7 to 10 years they should be old enough to breed.

Youngest organ donor in China: 33 hours old



Doctors and nurses stand in silence to honor the young organ donor. [Photo/China Daily]

On March 27, an organ donation procedure was carried out at Chongqing Daping Hospital on a donor who only lived for 33 hours.

The baby boy was diagnosed with severe congenital heart disease after his mother gave birth by caesarean section, or c-section. After their son passed away, the parents decided to donate the child's organs to help extend another's life, according to the local Red Cross Society.

After a doctor evaluation, the boy successfully donated two kidneys that would be used to help save a 27-year-old woman with renal failure.

The Red Cross Society of China and the former Ministry of Health started the organ donation system in March 2010, encouraging citizens to voluntarily donate organs after they pass away to help others live longer.

The baby boy in Chongqing is the youngest donor since it was established.

Public understanding and support of organ donations has significantly

improved over the years in China. Nearly 170,000 people had registered as organ donors in China by the end of last year.

A total of 4,080 organ donations were made in 2016, with 11,296 organs being donated, an increase of 47.5 percent from 2015, according to the Red Cross Society of China.

<u>Chongqing to unveil world's longest</u> <u>glass skywalk</u>



This photo shows the exhilarating skywalk. [Photo/China Daily]

A theme park in Wansheng, Southwest China's Chongqing, will unveil an 80-meter-long glass skywalk in one month, which could break the Guinness World Record.

The A-shaped sky corridor is three times longer than the Grand Canyon Skywalk in the United States.

With its stone forest, the Wansheng Ordovician Park boasts unique geographic

landscape from the Ordovician Period.

The skywalk is currently undergoing a test run and hopefully will open to the public on May 1, according to the park manager.

"We are applying for a Guinness World Record as the longest glass skywalk in the world," said Tang Nan, the park manager.

Some tourists have already been attracted to the spot and experienced the walkway.

"So many people want to walk on it and there is always a long line," Tang said.

In May 2015, Longgang National Geological Park in Yunyang county, Chongqing, unveiled a 26.68-meter-long glass skywalk which was said to be the world's longest one at the time.

Online users in China read most books



Online users in China read most books. [File Photo]

New data from German market research institute GkF has revealed that online users in China read the most amount of books daily.

The data, released in March, came from the company surveying more than 22,000 people aged 15 years and above in 17 countries.

China recorded the highest percentage, with 36 percent of the online users surveyed reading books on a daily basis. The nation's result was six percentage points higher than the average of all the surveyed countries.

The survey showed that among different age groups, teenagers aged 15 to 19 read the most. About half of those read almost every day, compared to 23 percent of online users aged 40 to 49.

The survey also revealed that higher income earners — the top 25 percent of earners within the market — were more likely to read, with 40 percent of whom reading almost daily. In comparison, only 27 percent of the bottom quarter of income earners read everyday.

Women were also more likely to read books, with 38 percent of those surveyed reading almost every day, compared to 34 percent of their male counterparts.

Xu Qin appointed acting governor of Hebei

Xu Qin was appointed vice governor and acting governor of north China's Hebei province on Friday.

The decision was announced at a morning session of the standing committee of the provincial legislature, which also accepted the resignation of governor Zhang Qingwei.

Xu, who was born in 1961, graduated from the Beijing Institute of Technology with a major in optoelectronics, according to an introduction from the official website of the Hebei provincial government.

He had worked with the National Development and Reform Commission and earned a doctorate from the Hong Kong Polytechnic University before moving to south China's Shenzhen in 2008, where he served as the mayor from June 2010 to March 2017.