

Avian influenza under debate

Experts may be debating the possibility of migratory birds carrying the avian influenza virus, but poultry in Beijing are protected from any contact with the outside world, as Yu Nan discovers

During this past year's winter, the Poyang Lake State Nature Reserve has been home to some 500,000 white cranes, swans, wild geese and other migratory birds. The number of species sighted has increased from 150 in 1983 to a historical high of 320. CAI JIE

People generally used to pay little if any attention to the millions of migratory birds in East Asia on their twice-annual pilgrimages between New Zealand and Siberia. However, since avian influenza, or bird flu, has taken hold in the region, some scientists are suggesting that migrating birds may be responsible for carrying and introducing the virus to various parts of Asia, including China. They advise that people should be aware of this possibility and, therefore, avoid any sort of contact with migratory birds. "We are keeping a close watch for any changes in flight patterns or behaviour of migratory birds, but not in an invasive way," Liu Binsheng, deputy director of the zone administration of Poyang Lake, in East China's Jiangxi Province, told China Daily.

The largest freshwater lake in China, with an area of 22,400 hectares, Poyang Lake is a major stopping point for migratory birds passing through China, including white cranes, wild geese and dozens of others species. The estimated number of sightings in 2002 totalled 350,000, according to Liu.

Researchers have found that some rare species of migratory birds, such as the red-crowned crane and Oriental white stork, start to fly to cooler areas in north and northeast Asia in March. "So far the behaviour of the birds in their natural habitat on and around the lake seems to be normal," he said. "But we suggest that local people do not raise their ducks on the lake to prevent a possible cross-infection."

here on Poyang Lake," he said.

Nonetheless, he is still a little concerned about the reports that migratory birds may be carriers of the H5N1 virus, he said.

According to information given on the World Health Organization website, migratory birds, including wild

Everything you wanted to know...

An illustrated brochure about the prevention and control of avian influenza has just been published by Continental Press. Written by the Information Office of the State Council, "Tips on Avian Influenza," in both Chinese and English versions, is designed in the same style as the "Tips on SARS" brochure which won a special National Book Prize award last year.

Both brochures are aimed at the general public, including ordinary Chinese citizens and foreigners currently living in China.

Director of the Information Office Zhao Qizheng wrote the preface to the brochure. In simple and clear language, he outlines the background of avian influenza, which made its first killer appearance over 100 years ago.

The brochure consists of four parts: a scientific explanation of avian influenza, tips for timely prevention and control of the disease, ways to safeguard health given the current threat, and governmental policies set as a safeguard against the disease.

Cartoon artists from China Daily have created over 50 vivid illustrations to enliven the brochure. The first 200,000 brochures have already been distributed across the country.

waterfowl, sea birds, and shore birds, can carry the virus for long distances.

Such birds have, in the past, been carriers in the international spread of highly pathogenic avian influenza, although these birds themselves are also the most resistant to infection.

They can excrete the virus in their droppings, yet develop only a mild and short-lived illness.

"They have probably played a central role in spreading the disease, with their droppings infecting the waters where they live, or drying up and turning to dust that may be inhaled by other birds, including domestic ducks and chickens" said Zhou Jiao, a professor of zoology and veterinary science with the Beijing Academy of Agriculture and Forestry.

But some people believe such a perception has made migratory birds the scapegoats for the present avian influenza outbreaks. They have strong reservations about the hypothesis.

"It is highly unlikely they have brought the virus in," said Zhong Jia, a newspaper reporter and a keen bird watcher, who has just returned to Beijing from an investigative trip to check the migratory birds in the Yangtze River valley.

"The most important reason is that the wild birds are seldom, or never, in contact with domestic poultry even when they inhabit the same waters, according to my long-time bird-watching experience across the country," she said.

"And if poultry is raised here, the risk factor match," Zhong added. "Migrating birds usually sojourn at their stop-off points in January and northwards in March, but the virus usually arrives in February and start to flock began to spread in early January." Chu Guozhong, a noted expert in ornithology and director of the China Bird Banding Centre, agrees that the risk factor among wild birds is low.

"Migratory birds have their special living habits. They always choose stop-offs as far away as possible from humans," Chu said. "There is no need to be scared of the migratory birds." Zhong said she was glad to learn that the staff of the Huairou Reservoir in Beijing, has prepared supplies of millet along the riverbank for migratory birds. Huairou Reservoir, in the northern environs of Beijing, is a major stop-off for around 100 species of migratory birds.

"There is no need for people to fear migratory birds," she said.

In addition to food preparation, the reservoir also sends people to patrol the areas around nearby villages every day to monitor the condition of domestic chickens and ducks.

Now, WHO experts and research centres throughout Asia are studying whether the flu outbreaks in Viet Nam, South Korea and Taiwan Province may have been introduced by wild migratory birds.

The researchers have coined a phrase, the "East Asian Flyway." It is like a huge aerial motorway along which wading winged wanderers flock south in the winter and north in the summer. It has become a major area for research to Chu.

The most popular rest areas along the flyway include the Hong Kong, the cool volcanic lakes of Luzon, the lowlands of the southern Korean Peninsula, he said.

Don't let flyways fly away

In the Asia-Pacific region, migratory waterbirds use three major flyways covering the Asian continent east of the Ural mountains and south to the Caspian Sea and Arabian Gulf, across all the countries of the former Soviet Union and Asia, to Alaska of the United States, Australia, and island countries and territories of the Pacific Ocean east to the Pitcairn Islands.

The waterbirds generally migrate in a north-south orientation. For the long-distance migrants, especially shorebirds, three flyways have been recognized by researchers, who base their studies on biological and geopolitical considerations.

The three flyways include the Central Asian-Indian Flyway, the East Asian Flyway, and the West Pacific Flyway.

Although the flyways are clearly outlined in this way, researchers believe the detailed picture of migration

within the region is complex. Different species and populations vary in their migration strategies. Some populations do not follow these general flyways and spend the non-breeding period in areas covered by two or more flyways.

There is also considerable overlap between the flyway areas, especially at northern latitudes where the birds breed.

International researchers so far have identified at least 243 migratory species, of a total of 404 waterbird species, in the region. The birds visit at least 57 countries and territories in the Asia-Pacific region.

The researchers have called for special attention to the waterbirds in the region, as the conservation status of waterbirds across the Asia-Pacific

region varies greatly. Above all, there is still limited information on the sizes of most populations.

Wetlands International contributed to this article



Poultry returns from poultry panic

The big, green iron gate to Qu Shuli's chicken farm has been shut tight over the past week.

The message the gate delivers is clear: No entry.

The farm, where over 35,000 chickens are being raised, has been on full alert since the first bird flu case was reported in South China's Guangxi Zhuang Autonomous Region on January 27, according to Qu.

Located in the Daxing District of southern Beijing, the chicken farm, called "Shuli Breeding Centre," is one of the largest rural chicken breeding centres in Beijing.

"So far, our chickens are fine and healthy," said Qu, 41, owner of the farm.

"We are trying every means to protect our chickens until the virus goes away and, any contact from outside could be a source of viral infection," Qu explained after refusing the reporter's request to inspect the coops.

The farm, with 18 henhouses, a hatchery, a storehouse, a staff dormitory and an office, all spread over 3.3 hectares, is now an impenetrable fortress.

Only four staff, who have not left

the farm for more than a week are allowed to enter the henhouses and hatchery. Before entering, they put on disinfected white uniforms and stand under an ultraviolet lamp for three minutes to sterilize any contaminants.

Besides feeding the chickens, the staff check the birds' health twice a day, said Qu.

"The test results are reported to the local veterinary station by 4 pm every day," Qu added.

"We know how dangerous the virus is to our business so our response is naturally quick," she said.

The term "avian influenza" may be new to the media and public but it's familiar to all chicken breeders, said Shi Qingming, chief technician of the farm.

Shi has been raising chickens for more than 10 years, and started work at the farm when it was established in 2001.

"We regularly vaccinate the chickens and disinfect the farm, regardless of whether avian influenza or any other avian virus is present elsewhere," he said.

According to Shi, stud chickens, raised for breeding broilers, should be injected with six dif-

ferent types of vaccines a total of 15 times during the first 160 days of their one-year lives. Five of these injections are to prevent avian influenza.

The broilers, fed for around 45 days before entering the market, are given four types of different vaccines.

"And the avian influenza vaccines should be injected twice," said Shi.

Shi said the avian influenza vaccine they use is a mix of the H5 and H9 strains developed by Qingdao Biotech Research Centre based in Shandong Province and produced by Beijing Zhongmu Pharmaceutical Factory.

The coops are disinfected three times a week and the whole farm twice a week, he added.

All the disinfectant and vaccines are bought from big pharmaceutical factories that develop their products safely, he said.



"Strict control of human contact with chickens is the most important preventive measure," he said. "That's why no people from outside are allowed to enter the farm."

"A tiny mistake could lead to a disaster," he said.

"Luckily, not a single chicken we have raised has been found infected with any of the viruses. We hope this time, too."

Almost all the big chicken and similar routine disinfection measures, there have been detected so far in the Ministry of Agriculture.

Although Beijing is still regarded as a safe place to eat the meat is in live poultry



Workers vaccinate a chicken at the Shuli Chicken Breeding Centre in south Beijing's Daxing District.

COURTESY OF QU SHULI

has stopped at both farms and supermarkets.

Qu Shuli's biggest profit used to come from the selling of high-quality stud chickens to other chicken farms, but all her clients have cancelled their orders and contracts with a same explanation - the avian influenza scare.

The only compensation for Qu is that the broilers they raise are still welcome in the marketplace because frozen chicken can still be sold.

Qu keeps track of the news about the bird flu on television and in the newspapers every day and she is keen to see an early end

to the virus. She said it's hard to calculate her losses, since they will depend on how quickly the disease is brought under control.

"I felt a little better when analysts predicted a quick rebound once the virus is contained," Qu said.