BIRD TO WATCH

A species in serious trouble: Baer's Pochard *Aythya baeri* is heading for extinction in the wild

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Introduction

Baer's Pochard *Aythya baeri* was once a relatively common and widespread duck in Asia, although it may not have been abundant for a long time. This species has always been somewhat overlooked by ornithologists—partly due to access and surveying problems in areas where it occurred and uncertainty concerning the accuracy of some historical records—consequently its numbers and distribution have never been accurately quantified. Nonetheless, there can be no doubt that this species has undergone a catastrophic decline in recent years and is on the brink of extinction in the wild. Without an urgent response from the conservation community, it is very likely to be lost.

About 100 years ago, La Touche found the species to be 'extremely abundant' during autumn migration on the coast of Hebei province, China; by the late twentieth century it had become a scarce passage migrant there (BirdLife International 2001). As recently as the last decade of the twentieth century, many counts of a hundred or more individuals are on the record for countries in its former wintering range. But by the late 1980s, this lake-dwelling 'green-headed' diving duck was recognised as being in decline (Callaghan & Green 1993) and thought to number no more than 25,000 individuals (Perennou *et al.* 1994); as a result it was added to the IUCN Red List in 1994 classified as Vulnerable. In 2008 it was reclassified as Endangered, and most recently in 2012, following an assessment that probably fewer than 1,000 individuals remained (Wang *et al.* 2012), it was uplifted to Critically Endangered (BirdLife International 2013).

Despite its listing as Vulnerable in 1994, the species did not attract fresh attention and little new information came to light, except a fairly wide acceptance that it had largely disappeared from the south of its wintering range, including Thailand (BirdLife International 2001) and Bangladesh (Chowdhury *et al.* 2012). Only belatedly since 2008 has the level of concern risen.

Current status

Since 2010, efforts have finally been made to evaluate the status of the species and, very worryingly, it appears that numbers have declined still further in the past two years. In China during winter 2010–2011 there were still some significant flocks in the central Yangtze floodplain—in Hubei province there were 90 birds at Hong Hu in November 2010 and 131 at Liangzi Hu in January 2011 and in Anhui province, 760 at Wuchang Hu in November and 230 at Feng Sha Hu in February (Wang *et al.* 2012). However, in the past two winters, records from China have been few, with the largest flock being 26 birds at Poyang Hu in November 2012 (Table 1). All other counts have been less than 10 birds. This is despite two concerted efforts to locate birds in winter 2012–2013 (Table 1). The first was a detailed study of Liangzi Hu, with comprehensive monthly counts between October and March, but the shocking outcome was only one record of two birds (Table 1). The second was a wide-ranging census of as many sites as possible in the wintering range, particularly the central and lower Yangtze floodplain, during January 2013. Although coverage was incomplete, some 40 sites were surveyed in

Table 1. Counts of Baer's Pochard found during surveys in China, winter 2012–2013.

Site	Province	Date	Males	Females	Total
Wang Hu	Hubei	19 January 2013	2	4	6
Liangzi Hu	Hubei	1 December 2012	1	1	2
Yanming Hu, Zhongmu	Henan	2 February 2013			1
Yancheng NR	Jiangsu	8 November 2012			2
Nanji NNR, Poyang	Jiangxi	27 November 2012			26
Yi'an Chao	Anhui	25 February 2013	1	1	2
Dong Hu, Chengdu,	Sichuan	6 February 2013		1	1
Qinglong Hu, Chengdu	Sichuan	28 January 2013	1	1	2
Jin Hu, Deyang	Sichuan	25 January 2013		1	1
Totals			**5**	**9**	**43**

China, but a maximum of just 45 birds was recorded, including a well-watched pair that remained at Mai Po, Hong Kong, from 11 December 2012 until mid-February 2013, whilst the small number of key sites checked in Bangladesh and Myanmar all returned nil counts.

The temporal spread of these records means that some individuals may have been observed more than once—particularly as the species is known to move in response to local flooding conditions and human disturbance (BirdLife International 2001). Thus, the best we can say is that there were in winter 2012–2013 a minimum of 26 individuals, and probably at least 45 individuals.

Other observations were made in northern China during autumn and early winter 2012, when up to 4 (2 pairs) were at Yeya Hu (Wild Duck Lake), Beijing, in mid to late October, with one male remaining until early November. One male was also seen near Dalian, Liaoning province, in late November. Further south, two were in the Yancheng NNR area, Jiangsu province, during early to mid November, with a female there in mid December. Interestingly, B. Jones (*in litt*. 2013) reported that in autumn and early winter 2012 there were far more records around Beijing than the recent norm, although this was still only an estimated 12–15 individuals.

Recent breeding records are even sparser. In 2012 there was a confirmed breeding attempt at Hengshui Hu, in central Hebei province, and an unconfirmed report of four pairs at Dongping Hu, near Tai'an in Shandong province; these sites are south of the recognised breeding range (BirdLife International 2001, Callaghan 2005). In 2012, there were no breeding records from the core breeding range (north-east China and neighbouring parts of Russia), despite some searches at Lake Khanka and other Russian wetlands when the only record was of two individuals at Lake Khanka in August. However, two male birds seen in winter 2012–13—one at Liangzi Hu in December and one at Namdong reservoir, Incheon, Republic of Korea in mid November—were likely to have been first-winter individuals because of their relatively dull plumage and dark eye.

All this is a far cry from numbers seen just two years ago, and it is clear that Baer's Pochard is extremely difficult to find anywhere in its range. The statement by Wang *et al.* (2012) that 'we fear that the global population is now less than 1,000 individuals and could be very much lower than this', appears to be accurate—on current evidence there could be less than 100 individuals left in the wild.

What are the threats?

The reasons for the apparent rapid catastrophic decline of Baer's Pochard are not understood. Many wetlands, particularly within the core winter range, are now severely degraded and this is likely to be a contributory factor even if not the main cause. No other freshwater duck in Asia appears to be declining so fast—although population trend data on more numerous ducks are limited and imperfect and some other species may also be undergoing as yet undetected serious declines—but on face value it seems there is something specific about Baer's Pochard's ecology that is contributing to its decline. Habitat loss and degradation in breeding areas seems less likely to be a major problem, but there is little collated information—surveys and

Plate 1. Flying male Baer's Pochard, Liaoning province, north China.

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Plate 2. Female Baer's Pochard, Mai Po. Hong Kong, July 2011.

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Plate 3. Male Baer's Pochard, Liaoning province, north China, March 2011.

Plate 4. Baer's Pochard *Aythya baeri* at duck farm near Yeuyang, Hunan, December 2012.

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site assessments in breeding areas are urgently needed.

Another major threat faced by many Asian ducks is unsustainable harvesting of individuals; although the scale and relative importance of this is hard to quantify, it could be significant, particularly in China, where illegal poisoning and trapping of waterbirds is widespread and indiscriminate (Ma *et al*. 2012). Baer's Pochard has been seen in captive duck 'farms' where birds are supposedly captive-bred but in reality are primarily harvested from the wild—most often by collecting eggs, then hatching and rearing ducklings in captivity, as they can then be legally passed off at market as captive-bred individuals. Information on the scale of this practice is difficult to obtain but it appears to be significant (G. Lei pers. comm.).

In China gun ownership was legal until 1996 and shooting of wild birds, including Baer's Pochard, was a significant problem (BirdLife International 2001); now private gun ownership is illegal, so some have resorted to using crossbows quite legally, while firearms can still be held legally by many groups e.g. security services. Cases of

soldiers poaching wildfowl are documented, as are professional poachers who use 'blunderbusses' to shoot birds illegally (Ma *et al* 2012).

Ma *et al.* (2012), writing about present day China, state 'Various methods and tools were used for hunting such as guns, nets, steel traps, electric traps, poison bait, dazzling lamps etc. These methods are used illegally and frequently along the Yellow and Yangtze rivers. The mainstream media and the public focus on economic growth and improving living standards, so they pay little attention to poaching activities. Large scale hunting cases take place annually.'

Given that there is so little hard information, diagnosis of the cause(s) of decline is likely to take time, and in practical terms it may already be too late for this.

What can we do about it?

Because so little is known about the species and the cause(s) of its decline it is not possible to quickly identify actions that have a good chance of success. Action to save this species is likely to be costly, and have a low chance of success, so do we have to admit defeat and use scarce and valuable conservation resources elsewhere? Is it time to say goodbye to Baer's Pochard?

The population size and rate of decline, coupled with the inherent difficulties in stabilising the population, mean that its extinction in the wild appears to be imminent. In a close parallel with Spoon-billed Sandpiper *Eurynorhynchus pygmeus*, the rapid acceleration in decline of an already moderately small population has meant that the species has gone from moderate concern to virtual extinction before a conservation reaction has had time to develop. Sadly, in contrast to Spoon-billed Sandpiper, there is currently no indication that a significant reaction is about to take place.

It is more than likely that the key to saving Baer's Pochard is improved management of large wetlands in central China, and possibly other wintering sites elsewhere, together with eradication of harvesting activities, but these are difficult problems that will take much time, effort and cash to resolve. There are ongoing efforts to reduce wetland degradation and improve site management in China, but not focused on Baer's Pochard— in any case the species has reached the point where emergency close-order management is almost certainly needed.

If something practical is to be done in the short term, further searches for the species are an obvious starting point. Coverage in the last 12 months was far from complete and there may be more birds out there, and even though coverage was good at wintering sites in the central and lower Yangtze floodplain. Some sites are vast and very difficult to survey comprehensively, although it has to be said that the likelihood of significant numbers remaining uncounted is low. Another explanation for recent poor detection is that the wintering range may be changing. This is known to be happening with other waterbirds that breed in arctic and boreal zones and winter in temperate regions, and Baer's Pochard may also be wintering further north than previously recorded.

Baer's Pochard probably bred at two sites in Hebei and Shandong provinces in 2012 and as ducks are quite amenable to close-order management, action at these sites that ensure breeding birds are protected and breed successfully is crucial—this could include strict zonation and minimisation of disturbance, habitat protection at all times of the year, supplementary feeding, nest protection, and potentially translocation and boosting of reproductive output by direct intervention.

The global captive population of Baer's Pochard appears relatively healthy, thus we are not starting from scratch as with Madagascar Pochard *Aythya innotata* and Spoon-billed Sandpiper. However, there are concerns about the genetic purity of this population and this must be checked; if the fears prove to be justified, the pool of birds for a captive breeding programme will be smaller than it currently appears.

Clearly the outlook for Baer's Pochard is very bleak indeed, but if the worst happens, we need to ensure the very clear message from its plight is heeded. Whilst it may already be too late to save Baer's Pochard from extinction in the wild, this story is another strong warning about the health of Asian waterbird populations and the wetlands that support them. In recent years much has been made of the parlous state of shorebird populations and intertidal habitats in East Asia. However, what the Baer's Pochard situation tells us is that the future may be just as serious for inland freshwater species in Asia, particularly many other ducks. As conservationists, we ignore this warning at our peril.

Postscript: an appeal

If any readers are aware of any further records of this species from winter 2012–2013 please contact either the Oriental Bird Club or Wildfowl & Wetlands Trust (WWT). Any other recent unreported sightings are of great value, so please also report them.

Information is urgently needed from the whole of the breeding range, so if you have an opportunity to search for birds this summer please do so and send the results to WWT. If you liaise with WWT beforehand we may be able to provide useful guidance on methods and sites to visit. Negative

reports are also essential so we have information on where searches have been carried out.

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