

Chinese Pond Heron

Ardeola bacchus

Category A

Very rare vagrant.

1 record

World/British distribution (HBW Alive no date; Heron Conservation no date):

The current breeding range extends from north-east India north-eastwards across most of eastern China, north to Beidaihe, and Japan (which has recently been colonised), as shown in yellow in figure 1. The species winters in the south of the breeding range and in South East Asia, south to Thailand, Malaysia, Sumatra (Indonesia), the Philippines and Borneo (as shown in blue), although the extent of the wintering range is hard to determine due to overlap with similar species such as Javan Pond Heron. There is an area of overlap, where birds may be encountered throughout the year, in south-east China, Taiwan and northern Vietnam (as shown in green). It is considered to be abundant through most of its core distribution.



Figure 1: Distribution of Chinese Pond Heron

The northern birds are known to be more migratory, with the southern breeders less so, so the northern birds “leapfrog” the southern ones to winter in the more southerly regions.

It has showed signs of recent range expansion, having spread in eastern China and colonised Japan, where it was formerly just a rare vagrant (Heron Conservation). It is now regarded as a rare passage migrant in Mongolia rather than a vagrant, having been recorded annually in recent years (Bräunlich & Buchheim 2009).

British (BBRC) records to end 2020: 2

Kent (KOS) records to end 2020: 1

Vagrancy in Chinese Pond Heron

There have also been an increasing number of observations outside the normal range in Asia, confirming that this species is prone to vagrancy.

As a vagrant it has been recorded as far north as Lake Baikal in Siberia and, within Asia, to the west of its range in Bhutan (in 2013), Bangladesh, Sri Lanka (in 1995), northern Pakistan (in 2011), Tibet (in 2014), the Taklamakan Desert in western China, Kyrgyzstan (in 2004), on several occasions in India (where it is possibly overlooked, being very similar to Indian Pond Heron in non-breeding plumage), including at Gujarat in western India, and on two occasions in Oman (just within some definitions of the Western Palearctic): at Thumrayt (in August 2010) and Qatbit (in September 2012) (Eriksen *et al.* 2013; Heron Conservation; McNerny & Stoddart 2017).

It has also been recorded in Guam and has reached Australian territories on four occasions: the Cocos Keeling Islands in May 2006, Christmas Island in March 2008 and June 2011, and mainland Australia near Broome, Western Australia, in March 2008 (Birding-Aus 2008; McNerny & Stoddart).

There have also been three sightings in the North Pacific from islands off Alaska: at Antone Lake, St. Paul, Pribilof Islands from the 4th to 9th August 1996, on Attu Island, Aleutians West on the 20th May 2010, and at Gambell, St. Lawrence Island from the 14th to 15th July 2011. All three involved breeding-plumaged adults. The spring bird was considered likely to be a drift vagrant, and the late summer birds also may have been assisted by tropical storms moving north-east off the Asian coast. All were considered to be wild and admitted onto the North American ABA Checklist (Howell *et al.*, 2014; McNerny & Stoddart).

At the time of the local occurrence, in 2014, there had been five previous records in Europe, with one subsequent sighting plus another in Israel (Tarsiger no date; Perlman 2021):

- An adult at Romsdal, Norway on the 10th October 1973,
- An adult female at Viragoskut fish-ponds, Hortobagy, Hungary from the 14th to 22nd August 2000,
- An adult at Eccles-on-Sea, Norfolk on the 31st October 2004, later seen at East Dean, Hampshire on the 13th November,
- An adult at Rautavaara, Finland on the 17th July 2007,
- An adult at Turkansaari, Oulu, Finland in August 2012,
- An adult in south-west Denmark on the 21st June 2016 and then at Vest-Agder, Norway on the 23rd June,
- An adult at Jerusalem Botanical Gardens from the 12th April to 7th May 2021.

The local occurrence

The local record involved a first-winter bird (the first occurrence of a non-adult in Europe) present in the Hythe and Saltwood area between at least the 17th January and 13th March 2014, before being found dead on the 25th March.



Chinese Pond Heron at Turnpike Hill (Steve Gantlett)

The record by year is shown in figure 2.

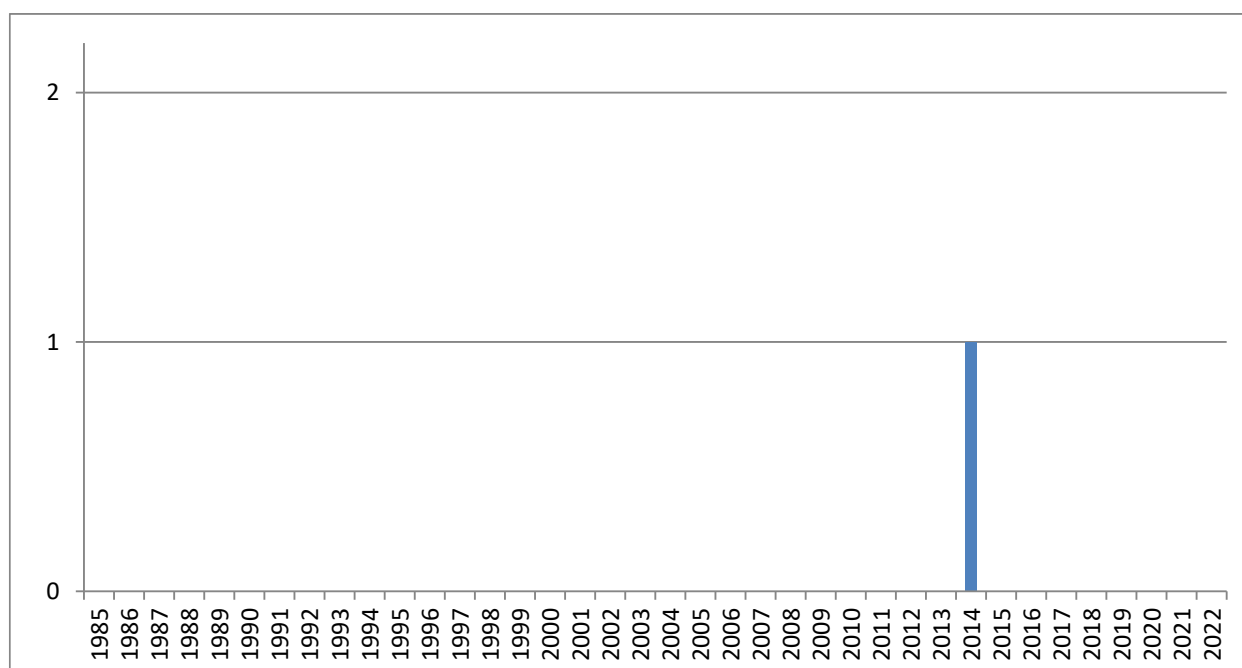


Figure 2: Chinese Pond Heron records at Folkestone and Hythe

The record by week is given in figure 3.

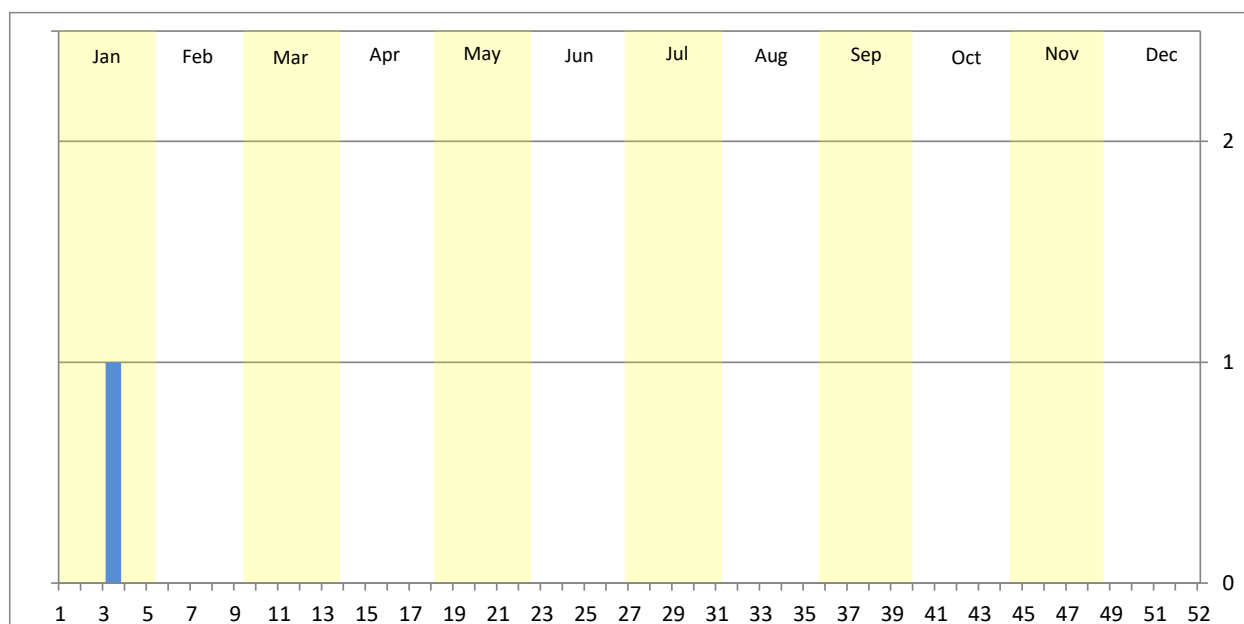


Figure 3: Chinese Pond Heron records at Folkestone and Hythe by week

Figure 4 shows the location of the record by tetrad.

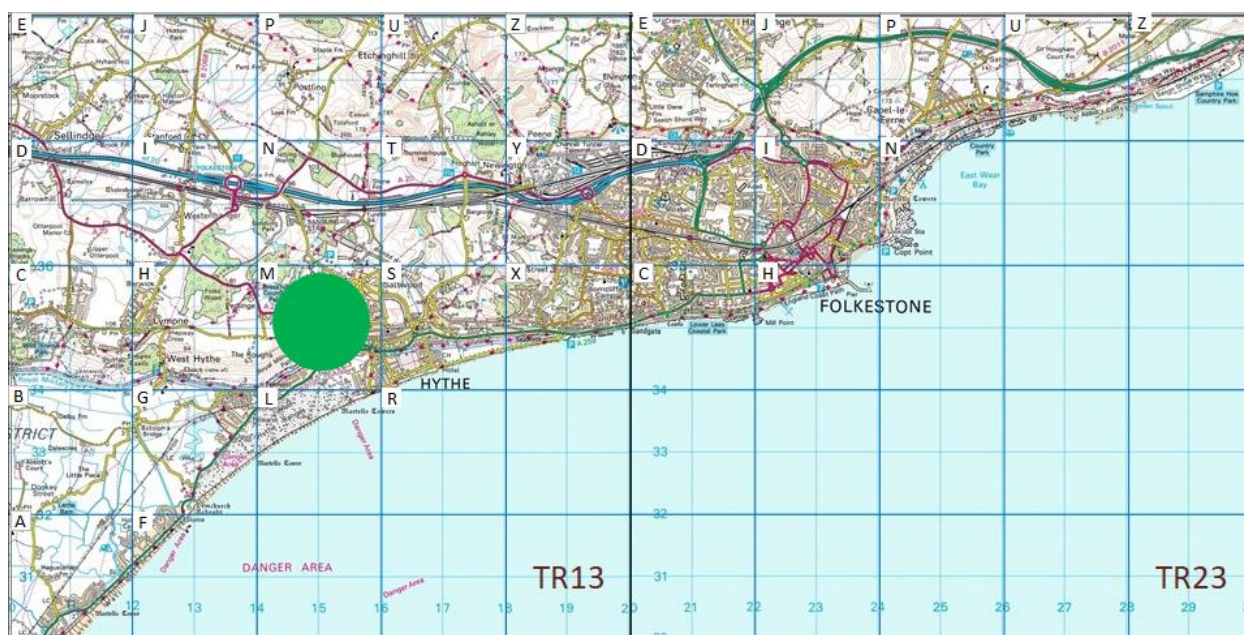


Figure 4: Distribution of all Chinese Pond Heron records at Folkestone and Hythe by tetrad

Confirmation of the only area record is as follows:

2014 Hythe and Saltwood, first-winter, 17th January to 13th March (found dead on the 25th March), photographed, partial specimen recovered, DNA analysis, stable isotope analysis (M. Dawson, I. A. Roberts *et al.*).

An account of the first area record is given below.

Chinese Pond Heron at Hythe and Saltwood
17th January to 13th March 2014 (found dead on the 25th March)

By Ian Roberts

Circumstances of the find:

On the 17th January 2014, Michael Dawson received a phone call from his neighbours, Valerie and Trevor Greening, to report a strange, heron-like bird on the lily pads of a pond within the shared grounds of their apartment block in Colleton Park, North Road West, in Saltwood. He went over to their flat and the bird was present. It took off as he arrived and the most striking feature was its white wings. It returned quite quickly and he managed to take a few photographs.

The pond in question is secluded, set in large, wooded grounds and with a surface area of perhaps 100 m² or more. Water-lilies cover about 20% of the surface, there is a significant area of reeds in one corner and the pond contains many small fish. The bird continued to make regular visits to the pond that day and on most days until the 24th January. It seemed to be of a nervous disposition and flew into nearby trees at the slightest disturbance. That behaviour proved to be typical throughout its stay, making it particularly difficult to photograph.

Unsure of the bird's identity, despite looking at images on the internet and in a bird book, Michael emailed the photographs to the RSPB at their Pulborough Brooks reserve on the 27th January. Their reply was that the photographs (images 01 and 02) appeared to show a Squacco Heron and they recommended that he should report the bird to the county recorder, Barry Wright, which he did.



Images 01 and 02: Chinese Pond Heron at Colleton Park, North Road West, Saltwood (Michael Dawson)

Barry Wright suggested that Michael should contact me, which he did on the evening of the 3rd February. I rang Michael to discuss the sighting and it was confirmed that there had been no further sightings since the 24th January. It was also ascertained that there was no possibility of viewing the pond from outside of the property. Whilst the most likely prospect (despite the species being virtually unknown in the country in winter) appeared to be that it was a Squacco Heron, it was clear that the possibility of one of the other pond heron species needed to be considered and I was obviously keen to see the bird and obtain better photographs. On the same evening (3rd February) David Walker, the warden of Dungeness Bird Observatory, received an email from Mike Kirk in Saltwood stating that he had seen a Squacco Heron recently in his garden. David forwarded the email to me.

Having checked the phonebook, which revealed that Mike lived in Fairlight Avenue in Saltwood, which was very close to Colleton Park, I decided to drive up the following morning (4th February) to see what viewing/access might be like at this new location. Almost as soon as I had parked up at the side of the property a Squacco-type heron flew across the road and dropped into the garden!

Unfortunately it was not possible to see into the garden from the road. As it was still quite early in the day and I had not noted down Mike's phone number, I returned home and called him a while later. Mike stated that he had noticed the heron in his garden but it had flown off. He also mentioned that it had made a couple of visits to his pond earlier that week but appeared to flush as soon as it noticed movement at the windows. Mike agreed to let me know if it reappeared but was understandably reluctant to allow general access to his property and, given the bird's infrequent, brief visits and wariness, a twitch would not have been viable.

Mike was able to provide a photo taken on 3rd February (image 04) which was particularly interesting as it appeared to show a dark "curtain" across the lower breast and possibly some maroon colouration to the breast sides, which are features of Chinese Pond Heron. At about the same time, Barry Wright received a rather poor quality image of the heron that had been taken by Nigel Baker at nearby Dark Lane in Saltwood, taken on about the 2nd February (image 03).



03: Chinese Pond Heron at Dark Lane, Saltwood
(Nigel Baker)



04: Chinese Pond Heron at Fairlight Avenue, Saltwood
(Mike Kirk)

Over the forthcoming days myself and other local birders began to search the surrounding area in the hope of locating the heron in a more convenient area and on the afternoon of the 11th February Steve Broyd located it in a publicly-accessible area by Turnpike Hill in Hythe, whereupon the news was broadcast more widely.

It was still present in the same area the following morning and over the next four weeks it was regularly seen at Turnpike Hill and at other locations in the Hythe and Saltwood area, as far west as Hythe Roughs and north to the centre of Saltwood, with the gardens at the end of Redbrooks Way becoming a favoured haunt. However it could be frustrating elusive at times, going missing for entire days, and remained rather flighty and wary, and never allowing close approach.

Now that there was a chance to study the bird and obtain better photographs the identification could be properly tested. Chinese Pond Heron fairly quickly emerged as the likely candidate and this was confirmed through further research (with particular help from Martin Garner) with a couple of excellent series of photographs in support of this, with Steve Gantlett's (images 05 and 06) and Paul Rowe's (images 07 to 09) being particularly instructive.



05: Chinese Pond Heron at Turnpike Hill, Hythe (Steve Gantlett)



06: Chinese Pond Heron at Turnpike Hill, Hythe (Steve Gantlett)



07: Chinese Pond Heron at Redbrooks Way, Hythe (Paul Rowe)



08 and 09: Chinese Pond Heron at Redbrooks Way, Hythe (Paul Rowe)

The bird was last reported alive on the 13th March and was sadly found freshly dead (in various parts, possibly having been killed by a fox) at Orchard Valley, Hythe on the 25th March by Gill and Mike Badcock. Gill had photographed the head (image 10) but this could no longer be found a day or so later, and by the time I was informed of the find (on the 3rd April) just a few wing and body feathers could be recovered (image 11). These were collected and samples were sent off so that DNA analysis and Stable Isotope Analysis could be undertaken.



10: Chinese Pond Heron head found at Orchard Valley, Hythe (Gill Badcock)



11: Chinese Pond Heron remains recovered from Orchard Valley, Hythe (Ian Roberts)

Description of the bird:

Size and structure: Similar to that of a Squacco Heron. The bird showed no obvious signs of being of captive origin: it was un-ringed, the bill and feet were in good condition and the plumage was not noticeably damaged or soiled.

Bill: The bill was thick throughout its length and distinctly two-toned, with a bright orangey-yellow base to the lower mandible contrasting with the mostly dark upper mandible (the orangey-yellow did just extend on to the lower edge) and tip (approximately one-third of the bill) – images 05 and 09 show the bill pattern particularly well.

Head: The lores were yellow with a short dark streak in front of the yellow eye. The crown was darkly streaked and the rest of the head was paler, with a buffy colouration and mottled darker. Some maroon feathering could be seen on the lower crown (just above/behind the eye), below the eye (bordering a noticeable white spot below the gape) and on the sides of the breast. It has been suggested that this colouration may have developed during the bird's stay, however the earliest photos (taken on the 17th January – images 01 and 02) of it are rather poor and so this is uncertain. Some of this colouration may have already been present in early February (image 04), though again it is difficult to be certain, and it was certainly noticeable by the 13th February (image 06). The sequence by Paul Rowe (e.g. image 07) shows that the plumage had altered little over the following three weeks to the 6th March.

Upperparts: The mantle was quite dark appearing to have an almost purplish hue in certain light conditions and photographs. The wings appeared pure white in flight in the rather startlingly way that they do with Squacco Heron, however photographs (e.g. image 13) show some marking on the primary coverts and primaries indicating, together with the shape of the primary tips, that it is probably a first-winter bird. The tail was also white.

Underparts: The breast was buffish, with distinct darker streaks, and some maroon feathering at the breast sides. The lower breast was somewhat darker, giving a distinct "curtain effect" across the lower breast (e.g. images 05 and 06). The belly and vent were whitish, contrasting with the darker breast colouration.

Legs/feet: The legs and feet were yellowish, with darker claws, and all were present and correct without any signs of damage.



12: Chinese Pond Heron at Hythe Roughts, near Green Lane (Phil Palmer)



13: Chinese Pond Heron at Hythe Roughs, near Green Lane (Phil Palmer)

Age: The bird appeared to have been a first-winter (second calendar year) due to the heavily pigmented dark outer primaries (image 13) and the rather tapered and worn tips to the outer primaries (image 14). Adults at this time of year have mostly/all white wing-tips and broad, rounded tips to the primary feathers. The inner three or more primaries have more rounded, fresher-looking tips (image 14), consistent with photographs of known first-winter birds at this time of year. It had begun to moult into breeding plumage, which helped greatly in establishing its identification.



14: Chinese Pond Heron at Hythe Roughs, near Green Lane (Phil Palmer), with annotations from Martin Garner

Identification:

Initial thoughts on the bird's identification erred on the cautious and it was broadcast as a probable Squacco Heron, as reported by the initial finder, and which appeared to be the most likely prospect, though it was clear that the possibility of one of the other pond heron species needed to be considered.

A literature search revealed that very little appeared to have published on the identification of non-breeding plumaged pond herons. Fortunately Martin Garner got in touch with me to say that he had looked at the subject with Ian Lewington, as part of the research for the Rare Birds of North America (Howell *et al.*), and had studied skins at the Natural History Museum, having published some information on his Birding Frontiers website (Garner 2014).

The first two photographs to emerge of the bird (image 01 and 02) gave no real clues as to its identity but image 04 appeared to show a dark curtain of feathering across the breast, also visible in images 05 and 06, which ruled out Squacco Heron (see image 15, below).



15: Chinese Pond Herons (upper 2) and Squacco Herons (lower 2) showing difference in underparts (Martin Garner)

Further features which appeared to rule out Squacco Heron included the dark loreal markings and thick, orange-based bill, though these characters may need further research.

Images 05 and 06 also showed emerging maroon plumage in the head pattern and underparts which made the identification rather straightforward as no other pond heron species has maroon feathering in these areas (see image 16 below).

The identification was later confirmed further through DNA analysis (see below).



Breeding-plumaged Indian Pond Heron



Breeding-plumaged Chinese Pond Heron



Breeding-plumaged Squacco Heron



Breeding-plumaged Javan Pond Heron

16: Breeding-plumaged pond herons (from Martin Garner, 2014)

DNA analysis:

A sample of the remains was sent to Martin Collinson at the University of Aberdeen for DNA analysis and he commented as follows (Collinson, J. M. pers. comm.):

"it is 100% identical to the four database sequences of Chinese Pond heron for the COI gene [mitochondrial gene cytochrome oxidase I, the most commonly used gene for DNA barcoding]. There is one Squacco Heron and one Indian Pond heron in the database, and it is 4-5% different from them, i.e. quite a difference. Unfortunately there is no Javan Pond Heron DNA sequenced at all, so unless we can find a sample I cannot include that in the analysis however ... it is inconceivable really that Javan would show an identical DNA sequence".

Stable Isotope Analysis:

A sample of the remains was sent to Keith Hobson at the Science and Technology Branch of Environment Canada. Analysis showed that "all isotopic information is consistent with the feeding habits and general range of the native distribution in east Asia with an emphasis more on freshwater feeding rather than marine". A "marine" influence in the isotopes would have been more consistent with a western European origin.

However Keith noted that “unfortunately, other parts of the world share these isotopic attributes. So, while other regions cannot be ruled out we can say at least that the isotope data is CONSISTENT with [rather than diagnostic of] native origin”.

Origin – treatment of other European records:

The first European record, in Norway in October 1973, was initially accepted onto Category A of their national list but later moved to Category D as part of a general review, whilst the second record, in Hungary in August 2000, was also initially considered to be wild but, following the Norwegian precedent, it was subsequently accepted onto Category D. The three further records in Fenno-Scandia, in Finland in July 2007 and August 2012, and in Denmark and Norway in 2016, are also currently held in category D, whilst the recent sighting in Israel in 2021 is yet to have been assessed.

An adult in breeding plumage seen at Eccles-on-Sea, Norfolk on the 31st October 2004, and later at East Dean, Hampshire on the 13th November (confirmed as the same individual by the presence of a diagnostic small, pale spot behind the eye) was considered to have shown signs of being a genuine vagrant, being wary, lacking a ring, being in an apparently undamaged condition, first arriving on the east coast of England and continuing an active migration to the south-west before again quickly moving on, and appearing during October at the same time as a number of Eastern Palearctic passerines, most notably two British “firsts” – Chestnut-eared Bunting and Rufous-tailed Robin, which share a similar range to Chinese Pond Heron.

However, there was concern that the bird was still in full breeding plumage in late October and November (at a time when it would be expected to have moulted into non-breeding plumage), and this led to the decision to admit it only to category D of the British List (Hudson *et al.*). Photographs were later forthcoming from Thailand of an adult in breeding plumage in late November which, although thought to be exceptional, had nevertheless been demonstrated to be possible (Garner). The Norfolk record was reassessed following the acceptance of the local occurrence, in light of the new evidence regarding plumage and the increasing evidence of vagrancy potential, and retrospectively accepted as the first British record (BOURC 2016).

Origin – condition and behaviour:

The bird showed no obvious signs of being of captive origin: it was un-ringed, the bill and feet were in good condition and the plumage was not noticeably damaged or soiled.

It remained rather flighty and wary throughout its stay, never allowing close approach.

The habitat choice of garden ponds was also not inconsistent with that of a wild bird as in its natural range the species is often found on small waterbodies in urban or populated regions.

Origin – captive pond herons in Europe:

In 2005, a temporary ban on the import of wild birds into the EU came into effect as part of measures to prevent outbreaks of the H5N1 strain of bird flu. This became a permanent ban from July 2007 (CITES 2007; RSPB 2007), so no Chinese Pond Herons will have been legally imported into the EU since 2005.

Some trade in wild birds has continued illegally since the ban, although there is understandably limited information on this. While the numbers involved have decreased considerably since the ban, the export of wild birds from China into Europe has continued (Li & Jiang 2014).

It is difficult to judge the extent to which species are currently held in zoos and public collections, and impossible to ascertain for private collections. The Zootierliste website (no date) aims to provide a “database for the current and former vertebrate inventories of European zoos and other public collections”. In 2014, this website listed no known holdings of Chinese Pond Herons in Europe, and only nine former holdings (as listed in table 1, below, reproduced from Roberts & Dawson 2017). As at 2022, there are still no current holdings and no additional former holdings.

Whilst it should be recognised that zoo inventories can be out of date, inaccurate, incomplete or involve misidentifications and subject to the caveats around undocumented trade, it appears that the Chinese Pond Heron was rare in captivity prior to the import ban and became even rarer thereafter, and had always had very limited breeding success, which would have been necessary for a first-winter bird to have escaped.

Table 1. List of European zoos and bird collections known to have held Chinese Pond Herons *Ardeola bacchus* in captivity. In the 'dates held' column a question mark indicates that the last year in which the birds were held is unknown, but that they were not in captivity in 2014.

	zoo or collection	dates held	notes
Germany	Berlin (Tierpark Friedrichsfelde)	1961 to ?	two young birds in 1996 did not survive
	Berlin (Zoologischer Garten)	In the 1930s	
	Halle (Zoo)	1963 to ?	
	Timmendorfer Strand (Vogelpark Niendorf)	2012 *	see below
Netherlands	Alphen aan den Rijn (Vogelpark Avifauna)	1992 to 1999	none bred
	Arnhem (Burgers' Zoo)	1992 to 1998	bred 1996, 1997
UK	Bratton Fleming (Exmoor Zoological Park)	2005 to ? **	see below
	Chester (Zoo)	1970 to 1971	none bred
	London (Zoo)	1959 to ? 1998 to 2005	two young birds in 1999 did not survive

Notes:

* The Vogelpark Niendorf currently has a photograph of the species on its website (www.vogelpark-niendorf.de/reiher.html) though it is not listed in the 'current inventory' (undated) on the Zootierliste website, only the 'former inventory' (also undated, but presumably 2012). The park is situated on the north coast of Germany, northeast of Hamburg.

** The website of the Exmoor Zoological Park does not give an end date for the former holding, but the species does not appear in its current list (www.exmoorzoo.co.uk/about-the-zoo-north-devon-species).

Table 1: List of European zoos and bird collections known to have held Chinese Pond Heron

It would appear from the Zootierliste website that the other pond heron species are slightly more frequently held in captivity in Europe (as shown in table 2, reproduced from Roberts & Dawson).

Table 2. Numbers of Chinese Pond Heron *Ardeola bacchus*, Indian Pond Heron *A. grayii*, Javan Pond Heron *A. speciosa* and Squacco Heron *A. ralloides* legally held in captivity in Europe. Current refers to 2014, while former refers to earlier years. Numbers held in captivity in the UK are listed in parentheses. Source: Zootierliste www.zootierliste.de/en/?klasse=2&ordnung=208&familie=20801&art=2050124

	Chinese Pond Heron	Indian Pond Heron	Javan Pond Heron	Squacco Heron
current	0 (0)	3 (0)	6 (0)	11 (1)
former	8 (3)	7 (2)	7 (3)	21 (3)

Table 2: Numbers of pond herons held in captivity in Britain and Europe.

Any pond heron in Europe, particularly in northern Europe where the Squacco Heron is a rarity, is likely to attract attention. For example, an Indian Pond Heron in Belgium in July 1988 appeared in a number of publications (e.g. Lewington *et al.* 1991), but was considered to have been of captive origin and is not included on the official Belgian List. It has not been possible to trace any other occurrences of this species in Europe.

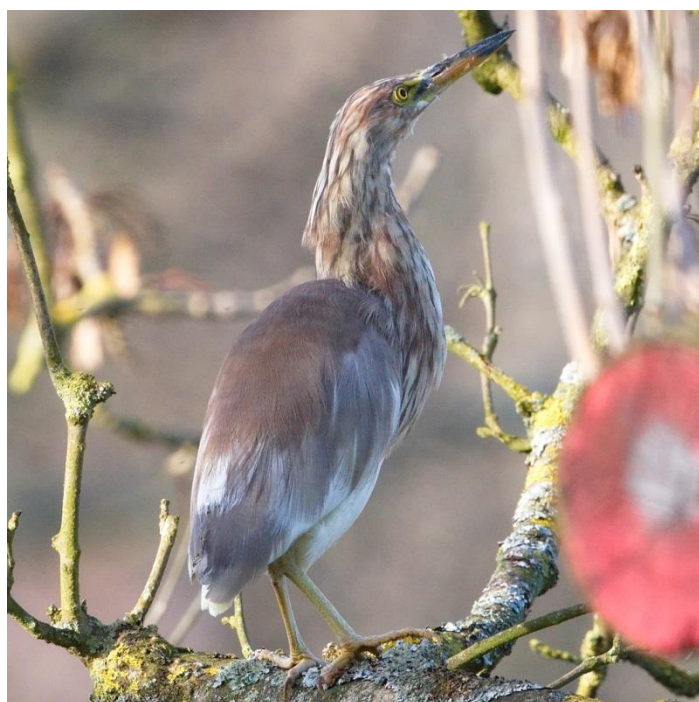
Given the greater numbers of Javan Pond and Indian Pond Herons in captivity, McNerny & Stoddart noted that “the near-complete lack of records of escaped birds of these two species in Europe was striking” and contrasted markedly with “the steady accumulation of Chinese Pond Heron records, all of which have appeared to be un-ringed, creating an emerging and plausible pattern of vagrancy by wild birds”.

Comments on the record:

The identification was accepted by the BBRC and the record passed to BOURC for assessment of its origin. It was accepted by the BOURC, by a unanimous vote after a single circulation, as a genuine vagrant and appears in their 46th report (BOURC, 2016), with the following comments: “on first impression this species may seem an unlikely natural vagrant to Western Europe and, instead, a more likely escape from captive collections. However, Chinese Pond Heron is kept rarely in captivity in Europe, and is a long-distance migrant with extralimital records from both continental Europe and North America. The stable isotope analysis was consistent with a native origin in east Asia, although other regions in the world share these isotopic attributes. Therefore the balance of evidence pointed very strongly towards the Kent record being of a bird that originated from a natural population”.

Although the local record was the first British record to be accepted onto the national list, it is now regarded as the second occurrence in the country.

A full account of the record was published in *British Birds* (Roberts & Dawson), whilst the BOURC published the rationale supporting the decision to accept both British records in the same journal (McNerny & Stoddart).



Chinese Pond Heron at Redbrooks Way, Hythe (Paul Rowe)

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Acknowledgements

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