

## THE PEREGRINE FALCON IN INNER LONDON AND FACTORS AFFECTING ITS EXISTENCE IN URBAN LONDON

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### Abstract

Following the recovery of the Peregrine Falcon *Falco peregrinus* in south-east England from the 1980s onwards, this species expanded its range westwards along the Thames in the 1990s and it was only a matter of time before the Peregrine would breed in Inner London (the Inner London recording area of the LNHS). When I spoke to the late Derek Ratcliffe about Peregrines breeding in Central London he said, "They should flourish as they have all they need; tall buildings to nest on and a plentiful supply of food in the form of the Feral Pigeon." Having been involved with Peregrine Falcons for over 30 years - either flying or observing them - it was wonderful to see them in London in the late 1990s. This paper deals with the issues that arise for the Peregrine in the truly urban environment of Inner London from 2001-2014.

### Breeding pairs

The first pair of Peregrines to breed in the LNHS recording area (the 'London Area') was at Docklands in 1998. It was not long before a pair bred in Inner London at Battersea

*Adult male on his lookout perch at the Tate. (David Johnson)*



Power Station, in 2001, where three young were successfully reared. Since that first breeding success Peregrines have gradually spread out, and in 2003 a second pair attempted to breed at a site near Regent's Park. The eggs mysteriously disappeared that year, but in 2004 this pair successfully reared two young. It was intriguing to see that the off-duty bird liked perching on the tower of the Tate Modern, by the river, even though this was about three miles away. Territories in the early days were huge, as there were so few pairs that there was no competition for nest sites. In 2005, hopes for the Regent's Park site were dashed when the birds did not return and there was no real indication as to where they might have gone. However, during a watch from the top of St Paul's Cathedral, a Peregrine eventually appeared and was visible until it disappeared into a very promising looking crevice on a distant tall building.

Further investigation revealed that this was the chosen nest site and that the female had already laid two eggs on a flat, hard ledge. She soon deserted this site because the eggs rolled around so badly that she could not incubate them. Instead, she laid the remainder of the clutch on a pile of bailing rope and debris she found high up on a ledge on the Old Bailey. Incubation there went on for seven days until one of the birds' talons got caught up in the 'nest' material and dragged it over the edge, where the eggs smashed. Incredibly, the very next day she was back at the Regent's Park site, where she soon laid a second clutch and duly brought off three young, but this was the last year they bred at Regent's Park. Since they seemed to prefer the Tate site, provision was made for the birds to make a proper scrape in the hope that they would breed successfully in 2006, and this is exactly what happened. The pair went on to rear 28 young in their 12 breeding seasons together from 2003 to 2014: a magnificent achievement.

Three years later a third pair occupied a site at Vauxhall and their first breeding success was in 2010, fledging four young. This pair spends the non-breeding season on the Houses of Parliament. A further pair became established at Charing Cross Hospital (Fulham) that year and they duly fledged three young in 2011. A pair was found breeding on the east side of the city in 2012 and a new pair bred in the west of the Inner London area in 2014, rearing three young. All these pairs have been faithful to their nest sites, which are becoming traditional.

At the time of writing there are seven pairs of Peregrines in Inner London, six breeding (as detailed above) and one non-breeding pair. These non-breeding birds are on territory in the western part of the area but have not yet found a nest site where, a) the owners want them on their building or b) ledges suitable for egg laying are available. Instead they



*Eggs: This site failed due to lack of substrate (nesting material). There is very little to keep the eggs together. (David Johnson)*

have laid on unsuitable surfaces such as window ledges and concrete paving slabs where there is not any material to make a shallow depression (scrape) to keep the eggs together.

If the eggs can roll around, the female cannot incubate them properly; she may incubate only one egg out of the three or four, and when there is a nest relief the male could, and does, incubate the 'wrong' egg, leaving the warm egg to go cold resulting in breeding failure.

In Inner London, Peregrines start incubation in March with the chicks fledging in early June. Juveniles disperse naturally, and there is no evidence of one being aggressively chased away. Occasionally a juvenile may still be hanging around in October/November but it will go before the next breeding season starts. The juveniles will usually disperse around August/beginning of September.

Sometimes individuals from one brood may drift into another pair's territory and accidentally they can become adopted. When the juveniles become stronger and more confident on the wing, they fly further away from the nest site exploring the area around them. This is when they meet up with other exploring juvenile Peregrines and, as the juveniles all look the same, the adults of the territory they go to do not know that their family has increased. With the density of Peregrines in Inner London becoming greater and territories getting smaller, this will occur more often. This happened in June 2012 when the male juvenile from the Tate site went east and joined another family, and he occasionally came back to the Tate site with another juvenile Peregrine. This will occur in June when the juveniles are fresh on the wing but, come July, new juveniles drifting into these areas will often get chased out of the territory by the resident juveniles who now see them as intruders.

### Analysis of breeding Peregrine pairs and young fledged in Inner London, 2001-2014

BAT = Battersea Power Station

CXH = Charing Cross Hospital

TAT = Tate Modern

UND = Undisclosed

VAU = Vauxhall area

YBF = young birds fledged (0=failed)

Year	Site A BAT	Site B TAT	Site C VAU	Site D CXH	Site E UND	Site F UND	Total YBF	Total breeding prs
2014	3	2	3	1	3	3	15	6
2013	2	2	0	3	2	-	9	5
2012	0	1	4	4	2	-	11	5
2011	0	2	3	3	-	-	8	4
2010	0	2	4	0	-	-	6	4
2009	0	3	0	-	-	-	3	3
2008	0	4	-	-	-	-	4	2
2007	3	4	-	-	-	-	7	2
2006	0	3	-	-	-	-	3	2
2005	3	3	-	-	-	-	6	2
2004	0	2	-	-	-	-	2	2
2003	1	0	-	-	-	-	1	2
2002	3	-	-	-	-	-	3	1
2001	3	-	-	-	-	-	3	1
<b>Total</b>	<b>18</b>	<b>28</b>	<b>14</b>	<b>11</b>	<b>7</b>	<b>3</b>	<b>81</b>	



*An adult female feeding a large juvenile. (Tony Duckett)*

### **Nest site complications**

The types of building in Inner London on which the Peregrines have chosen to breed are varied, and include power stations, office buildings, churches, hospitals and residential tower blocks. Experience has shown that, in order to ensure that the birds have a peaceful and successful breeding season, it is often essential to meet the owners of buildings, contractors, maintenance engineers and sometimes the Metropolitan Police Wildlife Crime Unit, to reach a clear understanding of what is needed.

As a Schedule 1 Species, the Peregrine is well protected by law, but when people in residential tower blocks are told that they cannot go near the nest site between January (when the breeding cycle begins) and the end of July (when the juveniles are strong on the wing) they are not easily persuaded to accept breeding birds on their building.

Generally, if maintenance work is done outside the breeding season - from August to January - it should give contractors sufficient time to do their work. Thanks to their co-operation, a lot of breeding attempts succeed which would otherwise fail.

### **Nest site suitability**

Given all the tall buildings in Inner London and the number of new ones planned, Peregrines should be able to find new sites in the future but their success will depend on various factors. It is essential that the birds are not encouraged on to unsuitable buildings, where they may attempt to breed but they will fail to fledge successfully. Unfortunately, well-meaning people often suggest putting up Peregrine nesting boxes or trays on unsuitable buildings because of their desire to 'give something back to nature' and likewise building developers can misguidedly believe that this is a means of fulfilling a need to make provision for biodiversity on new constructions.



*This juvenile desperately clings to the side of the building. (Phil Wallace)*

Particularly important is whether there will be enough (or any) perches and landing places for the young when they fledge. The current practice of facing new tall buildings with glass means they do not provide any potential landing ledges. All may be well until the juveniles make their first flight when after typically flying 60-70 metres from the security of the nest site they realise that they are going away from all they know. They then turn back only to find that they have lost height and - with no ledge to give them refuge - they will crash land and be at the mercy of cars, foxes or people (some of whom may have the best of intentions but will pass the bird into the wrong hands).

When the building is made of brick or concrete a young bird can sometimes cling to it wondering what to do. As they have not yet learnt that their tail is designed for braking, turning or slowing down, they usually hit the building quite hard. If they survive - and some do not, especially if it is a glass building - they slide down and usually end up on the ground.

If an urban nest site can be carefully monitored at the critical fledging time, a fallen juvenile can be placed on a tall roof near by or perhaps even on the nest site roof. It will take this particular bird a day or two to get over the shock and try again. Usually this 'cooling off period' seems to do the trick, because when it makes a second attempt its flight will be more powerful, longer and with quicker wing beats. Such birds seem to have learnt very quickly to stay up high and instead of panicking, as they do on their first flight, they think about where they are going and try to land properly. After three days their landings are reasonably good as they have learned how to use their tails for stalling before landing. Occasionally they get over-confident and overshoot a landing perch but then they simply fly around and land normally somewhere else. These problems are more serious for urban Peregrines than for those that breed at the more traditional cliff sites, where the young birds can more easily find perching places on



*Juveniles ready to fledge: three males and one female. (Tony Duckett)*

rocks, gorse, bracken etc, and learn to scramble and flap their way upwards until they find a secure perch.

Traditional stone-built churches have the potential to be some of the best nest sites for urban Peregrines in the future, providing they are high enough. This is because they can offer a well-protected nest site with lots of perches for the juveniles and they usually have the advantage of not being subject to the normal disturbances of modern life (eg window-cleaning, and lift- and aerial-maintenance).

### Size of territory

Originally the size of a Peregrine's territory in Inner London was between five and eight square kilometres (two and three square miles). With the number of tall structures to nest on and the abundant food supply (primarily the Feral Pigeon) these territories will get smaller with the increasing density of the population. At the moment, there are already two pairs which nest just under 1.5 kilometres (1 mile) from each other and both pairs have bred successfully in the same year. In Inner London, especially north of the river Thames, there is room for further pairs of Peregrines to establish territories.

### Intruders

The number of Peregrines in Inner London is increasing, and this can be seen by the number of Peregrine 'intruders' that fly into occupied territories in February, March and April. There appears to be a very healthy reservoir of Peregrines waiting to take over when an opportunity arises, and serious aggression can sometimes occur. In 2013, for example, the Tate pair chased an intruding male into a building where he became stuck. He was rescued, taken to a vet and released the following day. At another site, in March 2014, an adult male got caught in pigeon netting whilst being chased and had to be taken to a wildlife hospital. Within 24 hours a new male took his place and was soon soaring above the nest site with the adult female.

## Conflicts with other species

Several large raptor species regularly fly over Inner London and can come into conflict with the Peregrines. Common Buzzards and Red Kites, both of which are increasing in number in southern England, regularly have to be chased off. If these birds go over very high, the Peregrines do not see them as a threat and just watch them drift over. If they are too low, the adult Peregrines fly up to meet them from their 'lookout perch' and really go into the attack. Sometimes the large raptors will roll over on their backs and present their talons to the Peregrines; but after a few minutes of being persistently dived at, these raptors move on very quickly.

Other species that are frequently chased away are Grey Heron, Carrion Crow, Herring and Lesser Black-backed Gull. The Carrion Crow is one bird which Peregrines particularly dislike, and the falcons will aggressively chase each Crow until they have all dispersed.

The one species above all which Peregrines are determined to keep out of their territory is the Harris Hawk. In the author's experience, this is the only intruder that the Peregrine will kill or be killed itself in the attempt. Harris Hawks are being flown on a regular commercial basis by pest-control companies to scare away Feral Pigeons. When the Peregrine sees such a hawk, it immediately starts calling and diving at it. One was seen dropping like a stone after being hit by a stooping Peregrine, and a working Harris Hawk was given 'early retirement' when smashed in the wing by a Peregrine. In 2012, a Harris Hawk which was being flown by its handler near St Paul's Cathedral was attacked so relentlessly by the Tate pair that it was some hours before it would leave the sanctuary of its tree and return to its handler. With the increasing density of breeding Peregrines in Inner London, there is more risk of nesting pairs being disturbed by pest-controllers' birds, especially during the breeding period when the young have recently fledged and are still vulnerable and dependent on the adults.



*This adult male was chased by the Tate pair and got stuck between glass and metal. He was taken to a vet and released. (Madeleine Pugh)*



*Adult female on Marylebone Church feeding on a Feral Pigeon. This was the female from the Tate pair, 2003-2014. (Tony Duckett)*

## Hunting techniques

The author has witnessed 110 successful kills by Peregrines in Inner London, plus over 80 hunting expeditions that have resulted in a kill which was obscured by buildings. Some of these have been really spectacular. Different hunting techniques are used.

**Still hunting** In this, the commonest technique, the Peregrine is perched high up on a crane, church or other tall structure where it has an excellent all-round view. It waits patiently until some Feral Pigeons pass below, letting them reach a point about 100 metres away. Now the falcon is ready to attack. It launches itself, flying rapidly downwards and gaining speed by pumping its wings really hard. It aims directly at its prey, coming up into the chosen victim's blind spot which is behind and slightly below the bird. The impact can be spectacular with feathers flying everywhere. Should the Feral Pigeons see the Peregrine before it has got into position, they rapidly jink out of the way, flying down as fast as they can to the safety of the rooftops. This happens more often than might be expected since Feral Pigeons are very adept at avoiding attacks. The disappointed Peregrine will just return to its perch to wait for another opportunity and - with so many Feral Pigeons about - this is never long in coming.

**Flushing** In another technique the Peregrine will fly along a building or under a bridge, deliberately flushing Feral Pigeons in the hope that there is an easy one to catch. This may be a sick bird, one heavy in moult or a recently fledged one.

**Co-operation** Occasionally the Peregrines will co-operate, one chasing the victim and pushing it into the path of the other. The intended victim may not even notice the second Peregrine, having all its attention focused on its pursuer.

**Night hunting** This has been recorded in Inner London by the prey remains of nocturnal migrants being found at nest and cache sites. The Peregrine, as in other well-lit cities around the world, uses the light pollution to see its victims.



*Adult female gliding past. (Tony Duckett)*

**The stoop** This is the most celebrated hunting technique. It is rarely observed as it requires a lot of dedicated watching. The best time is on a warm, cloudy day: the warmth will allow the Peregrine to soar to a great height and the clouds will make it easier to follow as it drifts around, 'waiting-on' for a bird to pass below. These conditions also make it possible to follow the whole flight. When the Peregrine has its prey lined up it will start its dive, first pumping its wings to accelerate then closing them tight to its body and travelling at immense speed. Just when it seems that it cannot go any faster, it hits turbo - and then the speed is truly unbelievable. On one occasion, when a Peregrine soared up into the clouds, the Met Office confirmed the cloud base as being at 1,200 metres (4,000 feet). For it to see its moving prey from this height against a background of buildings, grey streets, and moving cars and people, and to judge the distance involved, the Peregrine's eyesight must be truly remarkable.

### **Prey taken by Peregrines in Inner London**

The predominant prey species that the Peregrine feeds on in Inner London is the Feral Pigeon, which accounts for around 80% of all prey seen caught in the air or of prey remains found. The other birds taken are a wide variety of species ranging in size and weight from a Mallard to a Goldfinch. The habitat that the Peregrine hunts over - although urban - has large and small parks with trees, lakes and the River Thames. Migrant birds use the river as a flyway on migration and the river naturally attracts ducks, waders, gulls and terns. Peregrines, wherever they are, seem to like being near to large water bodies - be it estuaries, lakes, reservoirs or rivers - probably because it offers them a wide variety of prey species. A male was observed trying to catch bats over Regent's Park lake in the evenings, and one catch was confirmed by a resident (who lived by the nest ledge where the birds bred in 2004 and 2005) when he saw the male carry a bat to the ledge one evening.

These species were identified from the remains found at nest, roost or cache sites and by prey actually seen to be caught between 2003 and 2014:

Eurasian Wigeon	Common Gull	Redwing
Eurasian Teal	Herring Gull	Mistle Thrush
Mallard	Common Tern	Jay
Pheasant	Arctic Tern	Jackdaw
Little Grebe	Feral Pigeon	Starling
Moorhen	Stock Dove	House Sparrow
Oystercatcher	Woodpigeon	Chaffinch
Ringed Plover	Collared Dove	Greenfinch
European Golden Plover	Ring-necked Parakeet	Goldfinch
Grey Plover	Common Cuckoo	Reed Bunting
Northern Lapwing	European Nightjar	
Dunlin	Common Swift	Other prey remains found,
Common Snipe	Kingfisher	including various escaped
Woodcock	Green Woodpecker	cage birds, were:
Black-tailed Godwit	Great Spotted Woodpecker	Bat <i>Pipistrellus</i> sp.
Bar-tailed Godwit	House Martin	Budgerigar
Eurasian Whimbrel	Dunnock	Lovebird
Common Redshank	Blackbird	Cockatiel
Black-headed Gull	Fieldfare	Parrot
Little Gull	Song Thrush	Parakeet

*This adult female in Hampshire was ringed at Vauxhall in 2012 and is the first record of a London-ringed Peregrine breeding in 2014. (Richard Jacobs)*



## Ringing

At some sites the chicks are colour-ringed whilst at other sites they are not. Much depends on the attitude of the residents, building owners and managers, and what type of building the birds have chosen to breed on. Where they have bred on a disused building there is not usually a problem with ringing as it does not affect anyone. This contrasts greatly with sites where the residents and managers regularly demand to know why they must not disturb the birds whilst the ringers can. Since the ringing process takes about 15-20 minutes, the same time that it takes to clean the windows, the whole thing seems (in the eyes of the residents) hypocritical.

It is not advisable to colour-ring Peregrines at secret and sensitive nest sites. Peregrine persecution can make it imperative that the location of some sites does not become public knowledge. Through the internet people who have read the colour-ring number can, with a little bit of research, find out where and when the bird was ringed. Before you know it, it is all over social media sites giving away the secret nest location to the very people from whom you were trying to keep it a secret.

There have only been a few sightings of colour-ringed Peregrines in Inner London. These were either arriving or dispersing. In 2007 a female (ringed that year at a site in East Sussex) arrived at Charing Cross Hospital and she is still one of the resident adults. A male ringed at Vauxhall in 2010 spent the winter in West Ealing. He was seen again in October 2011 with a female at a site just outside Inner London. A male ringed at the Tate site in 2012 spent the winter of 2013 at Alexandra Palace. Excitingly, a female ringed at the Vauxhall site in 2012 was found breeding in Hampshire in 2014. There she laid four eggs; three hatched, but sadly all three chicks died. This is the first record of a London-ringed Peregrine breeding. Hopefully she will be successful in 2015.

## Hazards for Peregrines

With their population expanding, more Peregrines are being found dead, injured, lost and confused. The lost birds are usually recently fledged juveniles that have got into a situation where they are stuck on a balcony or have come down to street level. They need to be taken to a roof near the nest building where they can be safely released. If the site is not monitored, birds are sometimes taken to rehabilitation centres by people who mean well. It is very important for the rehabilitation centres to ask where the bird came from. It is equally important for the centres to have the telephone numbers of the people who monitor Peregrine sites in London, as they will know what to do with such a bird. If none of this is in place, the bird will have an uncertain future.

Occasionally vets will phone the London Peregrine Partnership (LPP) with the news that a Peregrine has been handed into them by a member of the public. If the injuries are too severe, the bird is euthanised; but if, in the vet's opinion, the bird is in shock and needs to recuperate before being released, the author has a skylight and seclusion pen which has served this purpose well over the years. Vets have given Peregrines to LPP that have been picked up off the street after fledging and then illegally kept by members of the public. The tell-tale signs of this are: that the bird is unusually tame; the tips of the primaries and most of the tail feathers will have snapped (this is caused by the bird being kept in unsuitable conditions with the feathers becoming abraded on wire-mesh); and the cere may have been cut by the mesh during the bird's attempts to



*This juvenile female was illegally kept in captivity in unsuitable conditions. Note the snapped primaries and broken and heavily abraded tail feathers. She was taken to the Hawk Conservancy. (Rose Farmer)*

escape from the cage by banging into it. These birds are taken to the Hawk Conservancy in Andover, Hampshire where the skilled staff will take care of them (sometimes for a few months) prior to their release.

A very significant hazard for Peregrines is pigeon-netting. Experience to date is of two Peregrines in London stuck in this netting: one was found dead; the other was rescued, its injuries requiring it to be kept in care for about a month. If you have pigeon-netting on your building, you should ensure that it is secure and taut. If it is ripped, it should be repaired and not left blowing about in the wind. All birds are at risk from badly maintained netting, and it is a criminal offence to allow birds to die an inhumane death whilst trapped in the netting.

### **Watching Peregrines in Inner London**

Although this is can be an exciting species to watch, have patience! They can do a lot of perching while doing nothing else. The author's record for a perched bird is seven-and-a-half hours: all the Peregrine did was preen, change from one of its resting talons to the other, a few double wing-hitches and a lot of wing stretching. Another time you could be lucky and see a kill or two on a morning session, but you have to put in the time to get your reward. In Inner London it is difficult to watch Peregrines,

as you need to see a lot of sky and - with all the tall buildings around - you can lose the bird very quickly. Having permission to use a few rooftops helps tremendously, but with the concerns of Health and Safety and security, getting access to rooftops is difficult. If you get lucky, do not choose a really high roof as you can and will lose the bird very quickly against the backdrop of buildings. It is remarkable how the Peregrine blends in with its surroundings.

The river Thames is a good place for viewing: you have a lot of sky and the buildings are quite distant, allowing you a chance to follow the flight. The Millennium Bridge is good, as a pair like to perch on the chimney of the Tate Modern. From here you can see the birds hunting; and if the breeding season has been successful, the juveniles like to play in the sky around the chimney. If you watch from first light, the birds will usually be hungry and keen to hunt; also there are less people about. If you do watch, try and get someone to watch with you, as it is always nice to share the experience and - importantly - if one of you loses concentration, hopefully the other observer will see the bird leave its perch. It is frustrating to watch a Peregrine perched for hours, only to be distracted for a moment and turn round to discover that the bird has gone, then to find it flying back with a prey item it has killed and you have missed it. Hopefully, with two observers this will not happen.

January is the time to start serious watching as the days lengthen. This coincides with the behaviour of the Peregrines as, from January through to late March, you can see display flights which are incredible to witness. The sheer speed and flying skill of the male is outrageous as he rips up the sky, showing off to the female (usually perched near the nest site, watching) that he will be a good provider for the family. On one occasion, the author was lucky enough to witness a male Peregrine doing loop-the-loop at a great height as he went across the sky.

*A food pass from the adult male to the adult female at the Tate. (David Johnson)*



Mating occurs in February and March. February, March and April can see intruding Peregrines trying to find their own mate and territory. You may see fighting in the sky as the resident birds try to chase them off. April can be quiet as incubation takes place. There is more activity in May, as the adults will be feeding the young. In early June the chicks fledge and hopefully there will be juveniles doing aerial food-passes with the adults. When they are not doing this they like to play tag and chase each other in the sky, which is always a joy to see. In late September into October the hours of daylight are very similar to March and April, and for a few weeks the birds' body clocks respond as though it is spring again. You can see aerial and nest-ledge displaying as pair-bonds are reaffirmed after the hectic breeding season. During this time of year you can also see new birds taking over another bird's territory, as intruders will be looking for partners and nest sites for the coming breeding season. Not a lot of activity takes place when it is really hot.

Over the years, it has become apparent that urban Peregrines are becoming less afraid, and more tolerant, of man. This could be because the birds were born and bred in towns and cities and have become accustomed to their surroundings. They are used to the noise and sights around them, having become familiar with these either in the egg (hearing sirens, roadworks etc) or watching people going about their daily lives as they grow up on the nest ledge. Peregrines do not like being looked down upon, as it is 'their place' to do the looking down.

*Nestbox on a roof in Inner London. (Stuart Harrington)*



## The Future

In Inner London all Peregrines breed on man-made structures and often in close proximity to people. When Peregrines either choose or return to nest sites it is in the depths of winter in January or February when no one is out on the roof-tops or balconies. When the weather improves from April onwards (when the birds are breeding) people come out and that means disturbance.

At the moment there is a small dedicated band of volunteers who monitor and watch over nest sites. These people arrange meetings with building owners and companies who have the need to work on or near the nest building. It is important to have a good relationship with site owners. My concerns for the future are when this small band of dedicated Peregrine enthusiasts disappears. Who will pick up the responsibilities of making sure everything is running smoothly for the upcoming breeding season? From where I am sitting writing this I can see no one. It is the same people doing the work to ensure everything is in place for the breeding season, be it nest boxes/trays being erected or repaired, new substrate being put in them, tidying up last season's nesting mess (droppings, pellets and prey remains), informing building owners they have Peregrines on their building, arranging meetings and being there at that most critical and stressful time when the juveniles fledge in case any come down to street level and have to be rescued.

Overall there are 40 pairs of Peregrines in the LNHS recording area. Not all of these will breed and out of those breeding pairs not all will be successful. Even though 40 pairs sounds a lot, we should not get complacent about its status in London. Persecution is still a problem for this species in the UK, and it only takes a few companies and residents where the birds breed on their property to say, 'we don't want them here anymore'. Buildings where birds have bred can be demolished (this is happening now) and very good and successful nest sites can be lost forever.

*Four healthy chicks. (Stuart Harrington)*



I believe the Peregrine will always be in London but its continued breeding success depends on all of us.

The Peregrine inspired me into the world of nature and triggered my love of birds. Its beauty, grace, strength and incredible speed as its anchor shape sweeps through the sky still gives me a great deal of joy, as much now as it did when I saw my first wild bird back in the 1980s. I hope it can inspire the next generation as well, as this bird will always be under threat and needs all the friends it can get. I encourage you to join this bird in its truly wild state and enjoy watching its mastery of the air.

### **Addendum: The spread of the Peregrine Falcon nationwide**

The Peregrine Falcon, traditionally, is a bird of mountains, moorlands and coastal cliffs and was found on the coasts of southern England and in all suitable habitats in northern and western Britain. Exceptionally, they bred on man-made structures: Salisbury Cathedral in the late 19th Century, a church steeple in Norfolk in the 20th Century, and occasionally on quarry faces.

In 1939 the total number of breeding pairs was estimated to be 1,471: 819 pairs in Scotland, 359 in England and 293 in Wales. There was an estimated 13% decline during WWII, when many birds and young were killed to protect military carrier pigeons from becoming prey. Then followed a period of recovery until 1956, when the introduction of toxic organochlorine pesticides resulted in a population 'crash' to just 445 pairs by 1971. After these substances were banned, a further recovery began and the population grew to 730 pairs by 1981 and 1,184 by 1991.

By this time, as numbers were getting back to normal, Peregrines began using man-made habitats such as tall buildings and quarries much more regularly, and this really opened the way to their nationwide expansion. Starting in Merseyside in 1989, the use of man-made sites took time to develop; but in 1994 the spread began, with Peregrines nesting in Leicestershire, Worcestershire and Oxfordshire for the first time. Indeed, a range expansion of 200% took place between the 1968-72 Bird Atlas (Sharrock) and the 2007-11 Bird Atlas (Balmer *et al.*).

Meanwhile, originating from Devon in 1985, Peregrines settled in Dorset and the Isle of Wight, before reaching Sussex and Kent in 1989/1990. They too were soon attracted to high buildings, such as power stations in North Kent, and by 1998 had become an increasingly frequent sight in the London Area as they prospected sites along the Thames.

Nesting in Inner London first occurred at Battersea power station in 2001, and by 2014 a total of seven pairs were present in the Inner London area with another 33 pairs on territory in the remainder of the LNHS Recording Area.

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*Female Peregrine on her favourite hunting perch. (Tony Duckett)*

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