

1 Air pollution to speed birds up

2 It was a **challenging** task for a pigeon. It was October 1918 and the 77th Infantry Division was **cut off**
3 **from** all other American forces. Major Charles Whittlesey sent a homing pigeon to inform allies of the
4 soldiers' difficult situation. Shot after shot was fired from the trenches as it made its perilous journey.
5 Then, just as it reached Rampont, the **local headquarters**, a bullet shot off its leg. It died eight months
6 after the war ended, and **received** the Croix de Guerre posthumously, for the message it delivered had
7 saved the lives of 194 men. The pigeon was then stuffed and shipped to the Smithsonian Museum, in
8 Washington, DC, to be remembered as Cher Ami, the bravest homing pigeon of the First World War.

9 Being shot at will quicken anyone's journey. But might the thick smoke of battle have helped Cher Ami
10 on his way too? That, at least, is the **suggestion** of a study just **published** in *Scientific Reports* by Li
11 Zhongqiu of Nanjing University, in China, and Daniel Blumstein and Franck Courchamp, who both work
12 at the University of California, Los Angeles.

13 Dr Li and his colleagues have **attempted** to study how air pollution **shapes** the behaviour of **migratory**
14 animals by **collecting** information on homing-pigeon competitions organised by the Chinese Racing
15 Pigeon Association. **In particular**, they have **analysed** 415 pigeon races run between the same two
16 points, 300km apart, on the **heavily** polluted North China Plain, during the autumns of 2013 and 2014.
17 They **noted** rainfall, wind and air quality during each race, and **expected** to see numerous **delays** and lost
18 birds on days when the smog was **exceptionally thick**. But that is not what they found.

19 Of the 1,591 pigeons **released** in the races the team analysed, 715 made it home. This 45% return rate
20 remained the same **regardless of** whether the air was thick with pollution or not. What did change was
21 the time it took the pigeons to return to their natal homes. When the sky was a thick soup of poisonous
22 smog, with an air-quality **index** of 500, pigeons returned home at an **average** speed of 68.2kph. By
23 **contrast**, when the index value was zero and the air pure, the birds flew at only 55.6kph.

24 Why the birds travel faster under terrible **conditions** is unclear. Homing pigeons are well known to use
25 the sun, magnetic fields and infrasound to navigate but, in recent years, researchers have started
26 speculating that they use **odours** too. With this in mind, Dr Li and his colleagues **suggest** that the birds
27 have come to learn what the **pollutants** common to the biomass boilers and power plants found in
28 different parts of northern China smell like, and are using this information to navigate.

29 They do, however, have an **alternative hypothesis**. This is that the birds are flying faster **to get out of** the
30 **terrible** conditions as quickly as they can. One reason could be the **obvious** fact that thick pollution is
31 hard to breathe, but the researchers **argue** that fear may also be a factor. Thick clouds of smog make it
32 nearly impossible to **detect** predators, and pigeons may not be **smart** enough to understand that this lack
33 of **visibility** works the other way around, too. They thus just want to get the hell out of there as fast as
34 they can - quite possibly the true **motive** of Cher Ami as well.

Adapted from [The Economist](#)