## The birdman of Istanbul

rowing up in Istanbul, Cagan Sekercioglu (pronounced "Chaan Sheh-car-jee-ohlu") was so determinedly uninterested in soccer that his parents finally took him to see a child psychologist. Alone among his elementary school peers, Sekercioglu preferred looking for insects, hedgehogs, and tortoises in the empty lots near his family's apartment building. Growing older, he watched sadly as those empty spaces were filled in and the habitats of the creatures he loved bulldozed over – a result of Turkey's fast-paced development.

Today, Sekercioglu, now 31 years old, is a news-making conservation research scientist based at Stanford University. It seems fitting that a boy whose first name translates to

"hawk" in English grew up to work on wild birds, many of which are on a relentless path to extinction. A global bird species database which he began compiling 6 years ago is providing an unusual, systematic look at our era's fast-diminishing biodiversity. His findings suggest that as many as 14% of bird species may be extinct by 2100, with many more becoming "functionally extinct".

Bird populations are plummeting the world over for a flock of reasons, including habitat loss, climate change, and competition from non-native species. More

than 100 bird species have vanished since the 1800s, and another 1200 may disappear in the next 90 years or so, according to the UK's BirdLife International. It's all part of what many scientists describe as the biggest mass extinction of animal species in 65 million years, to which humans are contributing, and for which we will pay a price.

Birds support our lives, after all, keeping rats and bugs in check, spreading seeds and pollen, and so on. Their decline takes a toll on the environment around them. Take the passenger pigeon, whose extinction encouraged a proliferation of deer mice, which used to compete with the pigeons for acorns. Deer mice are the main reservoir of Lyme disease, which is increasing in incidence today. Even vultures play a part in human survival, as India is witnessing. After three of the most common vulture species in that country declined by one-hundredfold, the population of feral dogs skyrocketed. This, in turn, increased the occurrence of rabies in the local human population.

Sekercioglu calls his database one of the world's most comprehensive archives of any class of organism. It includes some 600 000 computer entries concerning nearly 10 000 living and 129 extinct bird species, including data on their life histories and ecological functions, collected over a full year by eight researchers. In a 2004 analysis, published in the *Proceedings of the National Academy of Sciences*, Sekercioglu

drew on his archives to come up with three scenarios for how birds may fare in this century. Under the status quo, one in

10 species will vanish, he predicted; in the the worst case, one in six species will become extinct.

The more specialized a species, the more danger it faces. One example is the five-foot-tall southern cassowary of Australia, which is vulnerable due to habitat loss, hunting, dogs, and car collisions. The cassowary and similar large avian species subsist on fruit, and their decline is bad news for large, fruit-bearing trees. On the other hand, sparrows, which can even eat French fries, are pretty robust. Common

pigeons, adapted to living on city buildings, are also doing pretty well.

Sekercioglu's findings have led him to take an increasingly handson role. "There are things we can do" to give birds a fighting chance, he says. Habitat can be restored and expanded; parks can be strategically linked; ecotourism can be promoted to give people financial incentives to protect wildlife instead of hunting it down.

With these kinds of measures in mind, Sekercioglu is now spending much of his time in the agricultural countryside of Costa Rica, where biodiversity still flourishes around

human-dominated development. Tiptoeing around farms with his radio antenna, he is tracking banded birds using telemetry, to determine what elements of their habitat are most important to preserve.

In between trips to Central America, Sekercioglu has also been working in Turkey and Ethiopia, where he is more directly engaged with involving people in the preservation of habitat for birds and other wildlife. Working with a Turkish businesswoman, Beti Minkin, he is looking into ways to expand ecotourism and US market access for organic farmers producing such delicacies as pomegranate molasses and tahini. "This is where there is the biggest hope for impact", he says. "Nothing makes as much of a difference to people as putting money into their hands."

It has taken some time, but Sekercioglu's parents, who still live in Turkey, now seem to understand his passion for conservation. The turning point, he explains, was when his mother visited him in Costa Rica. She spent a week with him in the field, where she was able to observe scarlet macaws and quetzals. "That kind of experience could transform anyone's point of view", concludes Sekercioglu. Let's hope there's still time for many more minds to be changed.

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