

Book review

Menno Schilthuisen 2018: Darwin comes to town: How the urban jungle drives evolution. — Picador, 293 pages.

When I was looking for a new urban ecology textbook for our research, I found a suitable one on the Internet. In the book's stimulating cover there are starlings, pigeons and a raven as well as pictures of several other animals and plants. Because of this vivid cover, I decided to get the book and read it. I wrote to the editor of *Ornis Fennica* and asked whether I could review this book.

About one month later she brought the long awaited book to me. I delightfully opened the book – however, I was disappointed with its layout. I saw only black text and a few black and white pictures but not any diagrams or text boxes as in “normal” textbooks. Unfortunately, I had promised to review this book within two months. I took it home and read it during the evenings before going to bed.

Surprisingly, after reading a few pages, I noticed that the text is well written. Its inspiring cases induced me to continue. All the excellent examples illustrate very well which animals and plants adapt to the novel environment, the city, on our planet. It seems that cities are not a poor and boring environment without any or only little wildlife. Although some of the examples are well-known from wildlife documents in TV programs and textbooks, I nevertheless found numerous new and fascinating adaptive cases of birds, mammals, fishes, insects and plants in urban environments.

The textbook has one main point: WHY there is so much variation within and between populations. One interesting question is why urban pigeons (*Columba livia*) are so black whereas rural pigeons have lighter feathers. One explanation may be a heavy metal contamination in the urban environment. To test this idea, researchers collected feathers from black and grey pigeons. They found that black feathers had higher heavy metal concentration than grey ones. They continued the



research and found that black pigeons were hereditarily adopted to remove heavy metals from their body in order to adapt into urban living conditions.

The urban environment is highly fragmented and this has led into isolation of populations. For example, white-footed mouse (*Peromyscus leucopus*) populations in New York are so highly isolated from each other that the home parks of individuals can be identified based on their genetic variations.

Recycling is currently a top-rated topic not only among human population but also among bird populations. For instance, smoking is unhealthy for humans, but it is beneficial for Mexican birds. In Mexican cities, birds collect cigarette ends for their nest materials. An increasing number of cigarette ends in the nest decrease ectoparasite mites in nestlings and increase their survival.

Menno Schilthuisen's book opens our eyes to observe cities more carefully. This book is a fresh and attractive experience from an important field of research. Most case studies were published during last years, hence this book has new information about biodiversity and its variation in cities around the world. This book is like a detective story where researchers around the world try to understand how well animals and plants adapted to urban environments. I recommend this fantastic urban ecology textbook for all ecologists who want to understand how quickly wildlife can adapt to the novel environments on our planet.

Jukka Suhonen