Anatomy of a scholarly article

Title: Bird Migration Advances More

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Abstract
Urbanization has a marked effect on the reproduction and other ecological and behavioral traits of many living organisms, including birds. In migrant bird species, earlier arrival timing is related to changes in destination. Because urban areas have temperatures that influence invertebrate development, they may attract migrant birds to cities rather than rural areas. To examine this, we analyzed differences between urban and rural habitats in mean arrival timing of 18 species of migratory birds in western Poland during 1983–2010.

Introduction
Urban development is increasing across the globe and having major impacts on animal life-histories [1–4]. Sometimes changes in the environment are so extreme that adjustment to novel urban environments may even require genetic adaptation [2,4]. Responses to environmental pressures include the need to maintain a phenology that is specific to a species. Among birds, the timing of reproduction may be affected by birds returning to their previous study sites. This is because arrivals are often delayed by cooler temperatures. However, to the best of our knowledge, there is a lack of data suitable to investigate this theory.

Literature Review
Recently many studies have indicated that rural and urban populations of birds differ from one another [2,4–6,11]. The main finding of our study, i.e., differences in arrival timing, also supports this view. Surprisingly, although these effects have been observed later, they are similar to the recently advanced hypotheses. This raises speculation as to the reasons, and suggests that a more indepth study may be justified.

Materials and Methods
Study Area and Data Sources
Observations on the first arrival dates (FAD) of 18 migrant bird species were carried out in the study area. We worked in two regions, Warsaw and Ziemia Lubuska, which together are a part of the Polish Lowlands. Additionally, additional data from 1983 to 2010 were collected from local birdwatching clubs. Data were collected by urban and rural populations in three cities (three cities, with a typical dense structure of buildings, factories and roads, on surfaces, and with populations exceeding 75,000 inhabitants.

Results
Mean First Arrival Dates
Mean first arrival dates in rural and in urban areas for common years are summarised in Table 1. As shown in previous studies, and based on all years recorded, there was a negative correlation between average arrival dates and urban records 

Analysis of the data collected by the methods described above.

Charts or Graphs

Graphs and charts are often used to graphically depict the results of data collection.

Conclusion
Our study indicates that urbanization may significantly affect the phenology of these particular species, and consequently their cities. Furthermore, because of certain similarities in environmental and climate change [3,9], we much wider relevance.

References