

WILDLIFE BIOLOGY

Editorial

Wildlife in cities: from drivers of adjustment to management

Marufa Sultana^{1,2}, Stephanie Kramer-Schadt^{3,4} and Sarah Kiefer⁵

¹Institute of Technology Assessment and Systems Analysis, Karlsruhe Institute of Technology, Karlsruhe, Germany

²Chair of Wildlife Ecology and Management, University of Freiburg, Freiburg, Germany

³Department of Ecological Dynamics, Leibniz Institute for Zoo and Wildlife Research, Berlin, Germany

⁴Institute of Ecology, Technische Universität Berlin, Berlin, Germany

⁵Department of Community and Ecosystem Ecology, Leibniz Institute of Freshwater Ecology and Inland Fisheries, Berlin, Germany

Correspondence: Marufa Sultana (marufa_sultana@hotmail.com)

Wildlife Biology

2026: e01773

doi: 10.1002/wlb3.01773

Keywords: cities, human dimension, resource availability, urban animal ecology, urban biodiversity, urban habitat, wildlife management



Introduction

The current trends in urbanisation vary across cities and geographic regions (Seto et al. 2013, Zhang 2016) and are creating distinct ecological consequences for urban wildlife (i.e. animals living freely in cities alongside humans) worldwide. Given these conditions, urban wildlife has gained significant attention in the 21st century (Magle et al. 2012, Elmqvist 2013, Rodewald and Stanley 2014, Collins et al. 2021, Sultana et al. 2023). There is an increasing focus on understanding the patterns and drivers of urban wildlife distributions, linking species behaviour, landscape ecology, conservation and management issues across rural–urban gradients.

There is growing evidence of wildlife behavioural patterns adjusted to urbanisation, for example in foraging or reproduction, or predator–prey interactions (Rodewald and Stanley 2014, Gallo et al. 2019, Gil-Fernandez et al. 2020). People perceive and value increasing wildlife presence in cities differently, varying from positive perception of enhanced nature experience and psychological benefits to negative concerns related to nuisance, safety, and disease risks (Soulsbury and White 2015, Castillo-Huitrón et al. 2020, Manfredo et al. 2020, Moesch et al. 2024). This is often associated with increasing human–wildlife conflicts and management issues, related to increasing numbers of non-native species, animal collisions with vehicles and buildings, damages to gardens, and the risk (and fear of) of zoonotic pathogen transmission (Riley et al. 2002, Magle et al. 2012, Peerenboom et al. 2020). Given these complexities, a comprehensive understanding of how urban wildlife adapt to cities, alongside the human dimension of coexistence, is essential to advance effective management and conservation efforts (Alberti et al. 2008, McCleery et al. 2014).



www.wildlifebiology.org

© 2026 The Author(s). Wildlife Biology published by John Wiley & Sons Ltd on behalf of Nordic Society Oikos

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

Understanding patterns of wildlife distributions and their co-existence with humans in cities is also tightly linked to urban landscape management. Here, landscape management predominantly focuses on different greening measures, such as managing trees in parks and forests in order to enhance human well-being and biodiversity. These measures can vary widely in size, structure, and integrity, ranging from large protected areas to small, isolated patches (Riva and Fahrig 2022), street trees (Leveau and Leveau 2020), and constructed green roofs (Partridge et al. 2020). While urban greening in general is widely recognised and implemented, it is not consistently documented how different measures of greening and its spatial configuration relate to behavioural shifts in wildlife and their interactions with humans across different taxonomic groups.

The Special Issue on 'Urban Wildlife' presents these existing knowledge gaps and brings together diverse studies focusing on wildlife adjustment processes. The processes broadly relate to behavioural, physiological or trophic level responses that enable wildlife to persist in urban environments. The compiled studies include both single species and multi-species assessments from different cities across North America, Europe, Australia and Asia. Most studies focused on mammals, followed by those examining avian, amphibian and insect taxa. Several studies integrate multiple spatial scales in their analysis to understand the role of landscape configuration, while also connecting people's perceptions and management decision-making processes in urban areas. Below, we summarize the studies and highlight the need for more integrated research linking patterns and drivers of wildlife distribution with human dimensions of wildlife management across rural-urban gradients.

Patterns of urban wildlife distribution in cities

In the present special issue, studies addressed a wide range of ecological patterns shaping urban wildlife distributions related to temporal activity, behavioural plasticity, species interactions, foraging behaviour and physiological responses. The studies collectively support the growing evidence that many animals have successfully adjusted to urban areas, for example European brown hares *Lepus europaeus*, red foxes *Vulpes vulpes*, and coyotes *Canis latrans*. These species, classified as synanthropic species, have adjusted to urban areas by, for example, changing their temporal activity patterns (Fives and Hallett 2025) and shifting to smaller home range sizes (Mayer et al. 2025).

Urban areas can function as refuges for many species (Spotswood et al. 2021). Yet, overall, species diversity generally declines with increasing urbanisation towards city centres causing higher abundance of synanthropic species. This pattern has been repeatedly documented, raising concerns about biodiversity decline (Callaghan et al. 2019, Sultana et al. 2022a). A similar pattern was reported by Elihu and Ortiz (2026) who showed the lowest mammal diversity in urban cores across California cities and by Kron and Root (2025) for amphibian species richness along an urbanisation gradient in north-western Ohio. Yamashita et al. (2025) also

discussed such a phenomenon, classifying raccoon *Procyon lotor*, European badger *Meles meles*, and white-tailed deer *Odocoileus virginianus* as synanthropic species, whereas puma *Puma concolor*, bobcat *Lynx rufus* and large ungulates were considered urban sensitive. This study provides support to the growing body of evidence indicating a shift in entire wildlife communities and behaviour due to anthropogenic disturbances along a gradient of human land use.

Research also reports altered predator-prey dynamics in cities (Gallo et al. 2019, Moura et al. 2022). In the present Special Issue, Taraporevala et al. (2025) show such altered trophic dynamics where apex predators such as wolves *Canis lupus*, puma *Puma concolor*, and bears (*Ursus* spp.) usually avoid cities, which likely gives rise to increased mesopredator abundance. Higher intensity of human disturbance can cause shifts in wildlife behavioural patterns, which may not only affect predator-prey interactions, but also likely influence reproduction and foraging – processes that may propagate across multiple levels of biological organisation, ultimately influencing species community composition (Fives and Hallett 2025). These observations may indicate potential evolutionary consequences that are not directly investigated in the present studies in this special issue, but are mentioned by several authors, particularly in relation to shifts in predator-prey dynamics and behavioural adjustment in urban wildlife (Fives and Hallett 2025, Krijnen and Hernández-Agüero 2025, Mayer et al. 2025).

Nevertheless, there are also urban avoiders that require specific resources, which typically decline as natural habitats are altered. A comparative study among the three Swiss cities of Zurich, Basel and Geneva by Basile et al. (2025) reports such patterns. It indicated the loss of specialists as one of the outcomes of urbanisation leading to avian communities dominated by a few urban-adjusted species, such as the house sparrow *Passer domesticus*. Another example is the bobcat, traditionally considered an urban avoider, but increasingly occurring at the urban-wildland interface in California, as illustrated by Elihu and Ortiz (2026). Bobcats were detected frequently crossing fragmented vegetated patches in urbanising landscapes, potentially driven by habitat fragmentation and the availability of prey, such as the desert cottontail *Sylvilagus audubonii*.

There are also contrasting findings suggesting that urban areas can serve as refuges for some habitat specialist species that are declining or threatened in natural environments. A study by Benjamin et al. (2025) on European hedgehogs *Erinaceus europaeus* in Nottinghamshire, England, supports this notion. Although the hedgehog is a species of conservation concern, Benjamin et al. (2025) found higher abundances in urban areas. Hedgehogs may prefer urban over rural areas to avoid their main predator, the European badger. Furthermore, the study suggests that the higher abundance of hedgehogs is likely related to the availability of supplementary feeding in urban gardens by pet-owners. Another example is the case of the smooth-coated otter *Lutrogale perspicillata*, a vulnerable species, studied by Hughes et al. (2024) in Singapore. Here, this otter has returned after an absence of three decades and

is now surviving in the city. However, whether this recovery can be sustained in the long term remains uncertain due to increasing concerns about potential human–otter conflicts and competition for resources in the future.

Drivers of urban wildlife adjustment

Animals that can adjust to the urban landscape likely benefit from artificial food sources and nesting opportunities, like the yellow-legged gull *Larus michahellis* in Barcelona that exploits buildings as nesting sites as discussed by Navarro et al. (2024). The authors reported around 150–300 breeding pairs within the urban area and the population likely benefits from medium-to-high buildings providing secure breeding and resting sites. Taraporevala et al. (2025) found that urban canids like coyotes and red foxes in Kansas, USA, avoided direct contact with humans whereas they exploited anthropogenic food resources and green spaces. Alongside food availability, the authors related urban landscape characteristics, such as urban green spaces, tree canopy cover, road infrastructure, habitat fragmentation and connectivity, noise and artificial light, to driving factors shaping wildlife distribution along the rural–urban gradient (Hughes et al. 2024, Basile et al. 2025, Mori and Osawa 2025, Yamashita et al. 2025, Elihu and Ortiz 2026, Huber et al. 2026, Straka et al. 2026).

Huber et al. (2026) studied the role of patch connectivity in shaping mammal diversity and species-specific occurrence in Freiburg, Germany. While the authors found a considerable negative effect of urbanisation on overall species richness, patch connectivity had a measurable positive effect on species-specific occurrence probability, particularly for wild boar *Sus scrofa*. It was also identified as an important factor influencing the occurrence patterns of roe deer *Capreolus capreolus*, red foxes *Vulpes vulpes*, European hares *Lepus europaeus*, and European hedgehogs *Erinaceus europaeus* across urban areas. Elihu and Ortiz (2026) investigated species richness and wildlife responses to landscape structure at multiple spatial scales in Los Angeles County, California. The study shows that green patch configuration with smaller patches can facilitate movement, dispersal and resource use and help wildlife to move through fragmented urban landscapes. It provides support for the growing evidence highlighting the importance of small patches for biodiversity in cities. While wildlife species diversity often increases with habitat size (Leveau et al. 2019, Di Pietro et al. 2021), it can also be shaped by neighbouring networks of small green patches (Sultana et al. 2022b). The study by Elihu and Ortiz (2026) also highlights the importance of varying levels of green patchiness and tree cover for animals in California. The study by Basile et al. (2025) pointed to similar findings by showing that greater tree canopy cover increases bird diversity, specifically the abundance of insectivores and omnivores. It also highlighted the significance of native tree species diversity, which contributes to canopy cover complexity and thereby shapes bird assemblages across urban areas.

Besides urban greening, artificial light and noise can affect wildlife through different mechanisms. Straka et al. (2026) indicated that variation in dietary composition and feeding

preferences among bat species, such as *Chalinolobus gouldii* and *Vespertilio vulturnus*, may be driven not only by differences in prey availability across urban and rural waterbodies, but also by species-specific sensitivities to artificial light at night. Mori and Osawa (2025) showed that anthropogenic noise, primarily from urban traffic, negatively influenced the occurrence of the cricket *Anaxipha pallidula* in Tokyo. The study also suggested an indirect effect through acoustic interference from the native cicada *Platypleura kaempferi*, whose loud calls may further reduce cricket occurrence. Another study by Krijnen and Hernández-Agüero (2025) found that noise pollution was a robust predictor of reduced predation rates in avian communities in Amsterdam.

The human dimension in urban wildlife ecology and management

This Special Issue also covers different dimensions of wildlife management and conservation, which include the public perception of wildlife, human activity intensity and their significance for trade-offs in wildlife management (Granados et al. 2024, Fives and Hallett 2025, Taraporevala et al. 2025).

People perceive and value wildlife differently, often categorising certain species as desirable and others as problematic (Castillo-Huitrón et al. 2020). Understanding how attitudes and social norms relate to human–wildlife interactions across different species groups and how people's perceptions relate to broader environmental values and nature-relatedness is therefore essential. One of the studies focusing on mammals in Freiburg, Germany, explicitly linked human perceptions of wildlife with people's experience and encounters with animals (Moesch et al. 2026). The findings suggest that nocturnal species have lower acceptance among people, possibly related to rare sightings and misconceptions, such as a fear of darkness.

Anthropogenic disturbance, such as human activity intensity in green areas can play a major role in causing shifts in wildlife activity patterns. A long-term camera trap study in Berlin, Germany, illustrates this by the observed interactions between red squirrels *Sciurus vulgaris* and their predators, including pets (Stuardo et al. 2026). Fives and Hallett (2025) also studied the consequences of human disturbance and indicated an almost 40% shift in temporal behaviour, (i.e. becoming more diurnal) in the case of the North American river otter *Lontra canadensis* in Gainesville, Florida. Granados et al. (2024) discussed the potential trade-offs between human activity intensity and wildlife conservation by studying the effects of dog-friendly zones in the San Francisco Bay Area, California. The study indicated that a shift in puma activity is likely to alter predator–prey dynamics and potentially increase human–wildlife interactions, such as more deer–vehicle collisions and greater risks of disease transmission due to dog–wildlife interactions. The authors suggest maintaining wildlife corridors, regulating human access and intensifying local education and awareness programmes to reduce negative encounters.

Alongside habitat restoration, wildlife management approaches that target sustaining animal populations often focus on supplementary feeding (Murray et al. 2016).

Supplementary feeding increases food availability artificially for animals in the city, eventually increasing occupancy as indicated by the study on hedgehogs by Benjamin et al. (2025). However, many managers have raised concerns regarding intentional food provisioning to wildlife, as this may result in overabundance of animals (Howard and Jones 2004) or changes in species composition (Galbraith et al. 2015). This can eventually lead to negative consequences such as an increase in human–wildlife conflicts and therefore may require further targeted management actions, like fertility control. A study by Silva et al. (2026) investigated such a scenario in eastern grey kangaroos *Macropus giganteus* in a peri-urban area of New South Wales, Australia. The study highlighted concerns about animal welfare and argued for better investigations of less invasive options for wildlife management.

To advance our understanding of human dimensions in urban wildlife ecology and management, there is a need to connect citizens through participatory approaches to support a transparent, inclusive and adaptive decision-making process. This is crucial as failing to do so may increase conflicts and reduce acceptance of wildlife management measures in urban areas, where wildlife and human land use and activity overlap (Taraporevala et al. 2025). The study by Taraporevala et al. (2025) demonstrates one of the few ideal cases of how participatory processes can contribute to generating public interest in wildlife management. Public engagement can, in turn, offer low-cost methods of collecting data on different wildlife species.

Effective wildlife management decisions can be made using value-based approaches. Following this, Boehne et al. (2024) applied Structural Decision Making in urban deer management near Atlanta, Georgia, USA. It builds on different steps from problem identification to understanding trade-offs in management decisions acceptable to society. The study

by Hughes et al. (2024) on the return of otters to Singapore shares concerns about their survival in the long term, since the negative interactions between otters and humans are rising. The study concludes that rewilding approaches bringing back endangered animals might be beneficial, they are highly challenging at the same time, especially in central urbanised areas. These challenges can be mitigated if decisions are prioritised together with society.

Synthesis and future research priorities

Urban wildlife studies included in this Special Issue significantly contribute to the growing body of evidence of shifting species diversity and behavioural patterns across cities and along the rural–urban gradient. The compiled understanding has advanced insights into the drivers of wildlife distribution and adjustment patterns from more than 20 cities. Still, the insights derived from the studies may be limited due to the lack of consistent data from different geographic regions to validate universal patterns (Table 1). In general, studies focusing on tropical cities remain rare (Magle et al. 2012, Sultana et al. 2023). Most studies are predominantly concentrated in the Global North, such as in Europe and North America, and often focus on a single city (Magle et al. 2012, Collins et al. 2021).

This current issue also includes several exceptional studies. For example, the studies by Basile et al. (2025) and Elihu and Ortiz (2026) conducted investigations across multiple cities. In addition, Hughes et al. (2024) and Mori and Osawa (2025) examined the consequences of urban wildlife dynamics beyond Europe and North America. The issue further features studies that extend beyond a single-species focus (Fives and Hallett 2025, Taraporevala et al. 2025, Moesch et al. 2026) and investigations relating urban impacts to multi-species occupancy patterns (Stuardo et al. 2026).

Table 1. Knowledge gaps and future research priorities identified through synthesis of the contributions to this Special Issue. The identified gaps and priorities are based either on direct or indirect indications from individual studies or on general inferences drawn across all studies (marked with *).

Categories	Knowledge gaps and future research priorities
Consistent data	Long-term standardised inventories of urban wildlife across cities (Hughes et al. 2024, Elihu and Ortiz 2026) Repeated temporal and spatial data of urban wildlife presences (Stuardo et al. 2026) Information on different wildlife taxa beyond mammals and birds in urban areas (*) Urban wildlife research and knowledge from the Global South (*)
Methodological approach	Integrated methodological approaches at the intersection of animal ecology, habitat dynamics and human dimensions (Granados et al. 2024, Huber et al. 2026, Moesch et al. 2026, Stuardo et al. 2026) Consideration for transdisciplinary research approach connecting different disciplines and stakeholders (Boehne et al. 2024, Taraporevala et al. 2025, Elihu and Ortiz 2026) Better understanding of mixed methods and their application (e.g. integrating citizen science, camera trapping, traditional monitoring and social surveys) (Taraporevala et al. 2025, Moesch et al. 2026) Multi-city comparative studies extrapolating and validating urban wildlife understanding across continents (*)
Human dimensions	Human perception, values and attitudes toward different wildlife species and their management priorities across varying geographic and cultural contexts (Boehne et al. 2024, Moesch et al. 2026) Human–wildlife interaction under varying management intervention contexts (e.g. urban greening, provisioning of artificial food and nesting sites, fertility control, etc.) in cities (Boehne et al. 2024, Granados et al. 2024, Hughes et al. 2024, Elihu and Ortiz 2026) Consequence of varying management measures for wildlife at different scales (e.g. intensity in human activity and land use, along rural–urban gradient) (Granados et al. 2024, Fives and Hallett 2025, Yamashita et al. 2025, Elihu and Ortiz 2026)

Nevertheless, taxonomic bias continues to prevail, as most studies remain focused on mammals. Amphibians and reptiles, in particular, appear to receive substantially less attention in urban research, where knowledge gaps persist regarding the resources required by these taxa, thereby limiting the effectiveness of urban conservation and management practices (Kron and Root 2025). For instance, Kron and Root (2025), in their study of anurans in northwestern Ohio, highlighted the need for future research investigating the importance of wet shrublands for urban amphibian communities.

Mixed methodological approaches and use of advanced technologies are noticeable across the studies. Sensors like camera traps are commonly used by researchers to detect animals, whereas citizen science, social surveys and participatory processes were identified as appropriate methods for data collection and analysis.

Although there is evidence of a diverse range of applicable methods, many studies reported greater constraints when sampling in urban areas compared with rural or natural sites (Table 1). Researchers identified several challenges, including restricted access to study locations (e.g. private property), limited logistical support for advanced equipment such as camera traps and GPS collars, difficulties in obtaining permits and ethical approvals for sensor-based inventories (particularly where camera traps may inadvertently capture images of pedestrians), and concerns related to animal welfare.

Alongside this notion, it is crucial to note that existing urban wildlife studies are mainly conducted by biologists and do not necessarily consider a transdisciplinary setting. This means that scientific research initiatives led by academics are not commonly developed in consultation with multiple stakeholders from different disciplines to identify societally relevant, problem-specific questions. Without the consideration of multiple stakeholders in cities, conventional research approaches can lead to disciplinary silos in urban wildlife knowledge, limiting our ability to understand wildlife's responses to different management interventions under varying geographic and cultural contexts. One example of overcoming such constraints is the study by Boehne et al. (2024), which adopted a participatory approach involving decision-makers and local communities to better understand the implications of human dimensions for wildlife management. The value of such approaches lies not only in generating more inclusive knowledge, but also in supporting decisions that reconcile wildlife conservation and management with broader biodiversity goals of cities.

There is a growing demand to understand urban biodiversity consequences at the interface of social-ecological systems to ensure benefits for both humans and other species, particularly as cities face coupled environmental and societal challenges associated with climate change (e.g. drought, flooding and rising temperatures) (O'Brien 2024). While this is well recognized, a significant challenge remains in explicitly integrating the habitat- and movement-specific needs of multiple wildlife species while simultaneously addressing broader societal challenges such as climate resilience. It is therefore essential to advance urban wildlife ecology by linking different interacting management practices that help identify what

measures simultaneously benefit humans and wildlife and where trade-offs occur, thereby supporting more informed and effective urban planning decisions.

Acknowledgement – We are grateful to Ilse Storch and Maria Persson for their continued support throughout the peer-review process of the papers included in this Special Issue and for their guidance during the preparation of this editorial. We also sincerely thank all authors for their valuable contributions to the Special Issue.

Funding – The authors received no specific funding for this work. Marufa Sultana was supported by YIG Prep Pro fellowship at the Karlsruhe Institute of Technology.

Conflict of interest – The authors declare no conflict of interest.

Author contributions

Marufa Sultana: Conceptualization (equal); Writing – original draft (lead); Writing – review and editing (equal). **Stephanie Kramer-Schadt:** Conceptualization (equal); Writing – original draft (equal); writing – review and editing (equal). **Sarah Kiefer:** Writing – review and editing (equal)

References

- Alberti, M., Marzluff, J. M., Shulenberger, E., Bradley, G., Ryan, C. and Zumbrunnen, C. 2008. Integrating humans into ecology: opportunities and challenges for studying urban ecosystems. – In: Marzluff, J. M. et al. (eds), *Urban ecology*. Springer, pp. 143–158.
- Basile, M., Augustinus, B. A. and Brockerhoff, E. G. 2025. Tree cover and geographic origin of tree species drive bird functional groups in urban environments. – *Wildl. Biol.* 2025: 1–9.
- Benjamin, E. S., Bates, A., Davis, R., Sévèque, A., Wild, J., Clutterbuck, B. and Yarnell, R. W. 2025. Artificial supplementary food influences hedgehog occupancy and activity patterns more than predator presence or natural food availability. – *Wildl. Biol.* 2025: 1–12.
- Boehne, S. D., Bynum Boley, B., Van Buskirk, A. N., Goode, K. O., Killmaster, C. H., Johannsen, K. L. and D'Angelo, G. J. 2024. Strengthening urban deer management with structured decision making. – *Wildl. Biol.* 2024: 1–13.
- Callaghan, C. T., Major, R. E., Wilshire, J. H., Martin, J. M., Kingsford, R. T. and Cornwell, W. K. 2019. Generalists are the most urban-tolerant of birds: a phylogenetically controlled analysis of ecological and life history traits using a novel continuous measure of bird responses to urbanization. – *Oikos* 128: 845–858.
- Castillo-Huitrón, N. M., Naranjo, E. J., Santos-Fita, D. and Estrada-Lugo, E. 2020. The importance of human emotions for wildlife conservation. – *Front. Psychol.* 11: 536529.
- Collins, M. K., Magle, S. B. and Gallo, T. 2021. Global trends in urban wildlife ecology and conservation. – *Biol. Conserv.* 261: 109236.
- Di Pietro, S., Mantoni, C. and Fattorini, S. 2021. Influence of urbanization on the avian species–area relationship: insights from the breeding birds of Rome. – *Urban Ecosyst.* 24: 779–788.
- Elihu, A. J. and Ortiz, J. L. 2026. Concrete jungle to urban oasis: evaluating scale, vegetation cover, and aggregation of urban greenspaces on wildlife. – *Wildl. Biol.* 2026: 1–15, <https://doi.org/10.1002/wlb3.01528>.

- Elmqvist, T., Fragkias, M., Goodness, J., Güneralp, B., Marcotullio, P. J., McDonald, R. I., Parnell, S., Schewenius, M., Sendstad, M., Seto, K. C. and Wilkinson, C. (eds). 2013. Urbanization, biodiversity and ecosystem services: challenges and opportunities: a global assessment. – Springer.
- Fives, M. and Hallett, M. 2025. Wildlife temporal behaviors in response to human activity changes during and following COVID-19 park closures. – *Wildl. Biol.* 2025: e01448.
- Galbraith, J. A., Beggs, J. R., Jones, D. N. and Stanley, M. C. 2015. Supplementary feeding restructures urban bird communities. – *Proc. Natl Acad. Sci. USA* 112: E2648–E2657.
- Gallo, T., Fidino, M., Lehrer, E. W. and Magle, S. 2019. Urbanization alters predator-avoidance behaviours. – *J. Anim. Ecol.* 88: 793–803.
- Gil-Ferna'ndez, M., Harcourt, R., Towerton, A., Carthey, A. and Newsome, T. 2020. Adaptations of the red fox (*Vulpes vulpes*) to urban environments in Sydney, Australia. – *J. Urban Ecol.* 6: 1–9.
- Granados, A., McDonald, Z., McPherson, K. and Stoner, D. 2024. Unraveling the impact of dog-friendly spaces on urban-wildland pumas and other wildlife. – *Wildl. Biol.* 2024: 1–18.
- Howard, P. and Jones, D. N. 2004. A qualitative study of wildlife feeding in south-east Queensland. – In: Lunney, D. and Burgin, S. (eds), *Urban wildlife: more than meets the eye*. Royal Zoological Society of New South Wales, pp. 55–62.
- Hughes, K., Travis, J. M. J. and Ponchon, A. 2024. Modelling the surprising recolonisation of an understudied aquatic mammal in a highly urbanised area: fortune favoured the smooth-coated otter in Singapore. – *Wildl. Biol.* 2024: 1–11, <https://doi.org/10.1002/wlb3.01200>.
- Huber, M., Storch, I., Peerenboom, G. and Sultana, M. 2026. Green city and connected habitats? Assessing the impact of urbanization on mammal diversity. – *Wildlife Biol.* 2026: e01519.
- Krijnen, B. and Hernández-Agüero, J. A. 2025. Noise pollution as a major disturbance of avian predation in Amsterdam. – *Wildl. Biol.* 2025: 1–11.
- Kron, B. C. and Root, K. V. 2025. Using anuran community diversity and *Pseudacris crucifer* to predict landscape quality across a land use gradient. – *Wildl. Biol.* 2025: 1–18.
- Leveau, L. M. and Leveau, C. M. 2020. Street design in suburban areas and its impact on bird communities: considering different diversity facets over the year. – *Urban For. Urban Green.* 48: 126578.
- Leveau, L. M., Ruggiero, A., Matthews, T. J. and Isabel Bellocq, M. 2019. A global consistent positive effect of urban green area size on bird richness. – *Avian Res.* 10: 1–14.
- Magle, S. B., Hunt, V. M., Vernon, M. and Crooks, K. R. 2012. Urban wildlife research: past, present, and future. – *Biol. Conserv.* 155: 23–32.
- Manfredo, M. J., Teel, T. L., Don Carlos, A. W., Sullivan, L., Bright, A. D., Dietsch, A. M., Bruskotter, J. and Fulton, D. 2020. The changing sociocultural context of wildlife conservation. – *Conserv. Biol.* 34: 1549.
- Mayer, M., Mortensen, R. M. and Sunde, P. 2025. New to town: home range size, habitat selection and behavioral adaptations by urban hares. – *Wildl. Biol.* 2025: 1–7.
- McCleery, R. A., Moorman, C. E. and Peterson, M. N. 2014. Urban wildlife conservation: theory and practice. – Springer, pp. 1–406.
- Moesch, S. S., Straka, T. M., Jeschke, J. M., Haase, D. and Kramer-schadt, S. 2024. The good, the bad, and the unseen: wild mammal encounters influence wildlife preferences of residents across socio-demographic gradients. – *Ecol. Soc.* 29: 6.
- Moesch, S. S., Sultana, M., Peerenboom, G. and Storch, I. 2026. Nocturnal neighbors: exploring residents' perceptions of urban wildlife related to animal traits identified by camera traps and literature. – *Wildl. Biol.* 2026: 1–21.
- Mori, H. and Osawa, T. 2025. Effects of complex soundscapes on the occurrence of *Anaxipha pallidula* in isolated green spaces in Tokyo. – *Wildl. Biol.* 2025: 1–10.
- Moura, C. W., Clucas, B. and Furnas, B. J. 2022. Humans are more influential than coyotes on mammalian mesopredator spatiotemporal activity across an urban gradient. – *Front. Ecol. Evol.* 10: 1–18.
- Murray, M. H., Becker, D. J., Hall, R. J. and Hernandez, S. M. 2016. Wildlife health and supplemental feeding: a review and management recommendations. – *Biol. Conserv.* 204: 163–174.
- Navarro, J., Martín-Vélez, V., Giménez, J., Antonio Garcia, J., Cermeno, P., Figuerola, J., Aymí, R. and Montalvo, T. 2024. Ontogeny of foraging behaviour in an opportunistic gull inhabiting urban marine ecosystems. – *Wildl. Biol.* 2024: e01406.
- O'Brien, K. et al. (eds) 2024. Summary for policymakers of the thematic assessment report on the underlying causes of biodiversity loss and the determinants of transformative change and options for achieving the 2050 vision for biodiversity of the intergovernmental science-policy platform on biodiversity and ecosystem services. – IPBES.
- Partridge, D. R., Parkins, K. L., Elbin, S. B. and Alan Clark, J. 2020. Bat activity correlates with moth abundance on an urban green roof. – *Northeast. Nat.* 27: 77–89.
- Peerenboom, G., Betge, F., Janko, C. and Storch, I. 2020. Wildtiermanagement im Siedlungsraum – Ein Handbuch für Kreise und Kommunen in Baden-Württemberg. Professur für Wildtierökologie und Wildtiermanagement. – Albert-Ludwigs-Universität Freiburg im Breisgau, p. 104.
- Riley, S., Decker, D., Carpenter, L., Organ, J., Siemer, W., Matfeld, G. F. and Parsons, G. L. 2002. The essence of wildlife management. – *Wildl. Soc. Bull.* 30: 585–593.
- Riva, F. and Fahrig, L. 2022. The disproportionately high value of small patches for biodiversity conservation. – *Conserv. Lett.* 15: 1–7.
- Rodewald, A. D. and Stanley, G. D. 2014. Wildlife population dynamics in urban landscapes. – In: McCleery, R. A., Moorman, C. E. and Peterson, M. N. (eds), *Urban wildlife conservation: theory and practice*. Springer, pp. 117–147.
- Seto, K. C., Parnell, S. and Elmqvist, T. 2013. A global outlook on urbanization. – In: Elmqvist, T. et al. (eds), *Urbanization, biodiversity and ecosystem services: challenges and opportunities: a global assessment*. Springer Netherlands, pp. 1–12.
- Silva, F. R. O., Comte, S., Keeley, T., Brandimarti, M. and Herbert, C. A. 2026. Assessing physiological, behavioral and movement responses to Suprelorin implant delivery methods in free-ranging eastern grey kangaroos *Macropus giganteus*. – *Wildl. Biol.* 2026: 1–16.
- Soulsbury, C. D. and White, P. C. L. 2015. Human-wildlife interactions in urban areas: a review of conflicts, benefits and opportunities. – *Wildl. Res.* 42: 541–553.
- Spotswood, E. N., Beller, E. E., Grossinger, R., Grenier, J. L., Heller, N. E. and Aronson, M. F. J. 2021. The biological deserts fallacy: cities in their landscapes contribute more than we think to regional biodiversity. – *BioScience* 71: 148–160.
- Straka, T. M., Carew, M. E., Valenzuela, I., Griffiths, S. R., Lentini, P. E., Lumsden, L. F., Rane, R. and Ree, R. Van Der.

2026. Urban bats show dietary flexibility in aquatic arthropod consumption at urban and rural waterbodies. – *Wildl. Biol.* 1–15.
- Stuardo, J. V., Louvrier, J. and Drenke, S. 2026. Urbanisation and human activities influence the co-occurrence of red squirrels (*Sciurus vulgaris*) and meso-carnivores in Berlin. – *Wildl. Biol.* 2026: 1–13.
- Sultana, M., Storch, I., Naser, M. N. and Uddin, M. 2022a. Land cover and socioeconomic factors explain avian diversity in a tropical megacity. – *Ecol. Soc.* 27: 19.
- Sultana, M., Müller, M., Meyer, M. and Storch, I. 2022b. Neighboring green network and landscape metrics explain biodiversity within small urban green areas – A case study on birds. – *Sustainability* 14: 6394.
- Sultana, M., Corlatti, L. and Storch, I. 2023. Are the same factors determining biodiversity in cities across different regions? comparing drivers of urban bird richness patterns in Southern Asia vs Western Europe. – *Urban Ecosyst.* 2023: 1–13.
- Taraporevala, N. F., Beckmann, J. P. and Young, J. K. 2025. Citizen science project on urban canids provides different results from camera traps but generates interest and revenue. – *Wildl. Biol.* 2025: 1–14.
- Yamashita, T. J., Lombardi, J. V., Wardle, Z. M., Tewes, M. E. and Young, J. H. 2025. Differences in mammal community response to highway construction along a small urban–rural gradient. – *Wildl. Biol.* 2025: 1–14.
- Zhang, X. Q. 2016. The trends, promises and challenges of urbanisation in the world. – *Habitat Int.* 54: 241–252.