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| Committee(s): Hampstead Heath, Highgate Wood, and Queen's Park Committee | Dated: 22 October 2024 |
| Subject: Wildlife monitoring on Hampstead Heath | Public |
| Which outcomes in the City Corporation's Corporate Plan does this proposal aim to impact directly? | -Diverse engaged communities -Leading sustainable environment -Vibrant thriving destination -Providing excellent services -Flourishing public spaces |
| Does this proposal require extra revenue and/or capital spending? | No |
| If so, how much? | N/A |
| What is the source of Funding? | N/A |
| Has this Funding Source been agreed with the Chamberlain's Department? | N/A |
| Report of: Katie Stewart, Executive Director of Environment | For Information |
| Report author: Adrian Brooker Senior Ecologist, North London Open Spaces | |

Summary

This report is intended to provide Members with an update on monitoring undertaken, and knowledge gained, of selected Hampstead Heath fauna over the last 10 years.

Recommendation(s)

Members are asked to:

- Note the report.

Main Report

Background

1. This report provides an overview of various fauna on Hampstead Heath, gained through monitoring activities on the Heath over the past ten years.

2. The information held in this report would not be possible without a great deal of volunteer effort from partners, including Heath Hands, London Natural History Society, Heath & Hampstead Society, Marylebone Bird Society, London Bat Group, and Hampstead Heath Birders. The City of London Corporation is grateful to have such dedicated partners assisting with gathering information on and protecting our open spaces.

Hedgehogs

1. Hampstead Heath continues to be heavily engaged with monitoring schemes and national projects that promote hedgehog conservation. Systematic hedgehog monitoring schemes have been in place on Hampstead Heath since 2015 when a monitoring trial was undertaken in Golders Hill Park by the Ecology team (Figure 1). A further investigation in 2016, involving training 15 volunteers in monitoring techniques, revealed that hedgehogs were present across the majority of Hampstead Heath.
2. In 2017, the City Corporation partnered with the Zoological Society of London's (ZSL) 'Hogwatch' team using wildlife cameras to record hedgehog and other mammal movements in Golders Hill Park. Three full-scale camera surveys have since taken place, involving placing 150 wildlife cameras across Hampstead Heath in 2018, 2021, and early 2024. Analysis of 2024 data is still being undertaken, but the 2018 and 2021 results revealed hedgehogs present on 49% and 44% of all camera sites respectively. (Figure 2)
3. In 2022, the City Corporation partnered with the Institute of Zoology and other organisations in a programme funded by Rewild London "Interconnecting Network of SINC's for Hedgehog Conservation (IN SINC)". The aim of this project was to identify wider hedgehog populations and their connectivity to other nature conservation sites as well as public and private spaces. It was thought that Hampstead Heath could be acting as a source of hedgehogs for surrounding areas, aiding hedgehog conservation across the wider region. (Figure 3)
4. Hampstead Heath and its northern surrounds were one of the trial sites for the National Hedgehog Monitoring Programme (NHMP) in 2023. This was one of the first surveys for the NHMP nationwide which is being rolled out this year (2024). These studies show that Hampstead Heath is supporting a robust population of hedgehogs and continues to be a critical site for hedgehog conservation in London.

Bats

5. As part of the Ponds Project (2015-2016), surveys were undertaken prior to the project to establish a baseline of species that could be impacted by the

works. This survey found that Hampstead Heath supports at least 9 species of bat: common pipistrelle, soprano pipistrelle, Nathusius' pipistrelle, noctule, Daubenton's bat, serotine, Leisler's bat, Natterer's bat and a long-eared bat species.

6. In 2017, a member of London Bat Group was engaged to carry out survey work across woodland sites on the Heath. A further species was detected during this survey, whiskered bat, although at low levels. This brings the Heath species total up to 10 species.
7. In 2016-2017, as part of a London Nathusius' pipistrelle bat project, London Bat Group members carried out harp net trapping on selected Hampstead Heath ponds. Hampstead Heath ponds were third for the most captures across 16 London Boroughs with a total of 15 caught, indicating the importance of the site for this species. (Figure 4)
8. In October 2023, as part of the yearly bat box checks, 26 individual bats were recorded; the highest number since the boxes were installed in 2015, the majority of these being soprano pipistrelles.

Other mammals

9. Camera surveys of hedgehogs proved useful in recording other mammals on Hampstead Heath.
10. Foxes, being the most ubiquitous, were recorded in high numbers at 95% of the 150 camera sites.
11. Since 2018, there has been an increase in the number of badger sightings in and around the Heath. A single badger was recorded on camera in the 2018 camera survey and a few sightings on Hampstead Heath were made by staff in 2021 and 2022. In 2023, a member of Heath Hands, using a wildlife camera, discovered the first badger sett on Hampstead Heath for many decades. This individual badger has since left the sett and the Heath is not yet believed to support a sustaining population of badgers. (Figure 5)
12. Muntjac deer are another larger mammal to be found on Hampstead Heath. Their numbers seemed to have increased across the Heath with more records in the 2021 camera survey than the 2018 survey. Early footage from the 2024 camera survey has shown the first image of a pair of adults with a deer fawn, perhaps indicating that they have bred here.
13. Smaller mammals present on the Heath include field vole, wood mouse, mole, brown rat, grey squirrel and common shrew. A single unconfirmed record of a

weasel and a single record of water vole have been noted in the last five years, alongside sporadic sightings of a large mustelid species (likely American mink).

Birds

14. Much of the bird data past and present can be attributed to many individual volunteers and volunteer groups. Current groups involved in the recording of birds on Hampstead Heath are the London Bird Club, Marylebone Bird Society (MBS) and the Hampstead Heath Birders. Each year, over 100 bird species are recorded by the Hampstead Heath Birders.
15. In 2020, the Heath and Hampstead Society co-ordinated the Heath's first Heath-wide breeding bird survey alongside the City Corporation and the Hampstead Heath Birders. Over 3000 breeding bird records were made of 35 bird species. This survey was repeated in 2021 with the addition of two further transect routes and again over 3000 breeding bird records were made, this time of 54 different bird species. From these two surveys it is thought that nearly 50 bird species breed yearly on Hampstead Heath.
16. Working with the City Corporation's Geographical Information System (GIS) team, digital mapping software (Field Maps) was used during the 2021 survey, allowing instant digital records to be made on site by volunteers which greatly sped up data analysis.
17. A third breeding bird survey is scheduled for 2025 and volunteers from the Hampstead Heath bird group are practising with the digital Field Maps application this year.
18. Highlights of recent breeding successes include buzzards breeding for the first time on Hampstead Heath in 2021 for over 100 years (Figure 6). 15 years ago, reedwarblers only used to breed on a single pond, the Bird Sanctuary Pond. Habitat improvements to Heath ponds with planting of the warblers preferred nesting habitat of common reed has seen the number of breeding reed warblers increase and their range expand to at least four Heath ponds (Figure 7). Two artificial kingfisher banks have been created on Hampstead Heath, one in the 1990s and the other as part of a heritage lottery RSPB scheme in 2012. The first bank has been used by a breeding pair of kingfishers for most years since 2000. This year, for the first time, both banks were being used, resulting in breeding kingfisher along both of the pond chains.

Reptiles

19. Hampstead Heath has had a self-sustaining population of grass snakes since at least the mid-1980s. It is thought to be the closest site to central London with a significant breeding population. In 2011, the ecology team from the City Corporation set up a monitoring scheme and trained volunteers in identification and survey techniques. In the first year of monitoring, over 150 snake records were made, and 12 volunteers were trained in identification and monitoring techniques.
20. The Heath Hands organisation and the volunteers themselves now take the lead in training and monitoring in partnership with NLOS's Ecology Team, and the scheme is now in its fourteenth year (2024). Since 2011, volunteers have made over 1500 snake records on some 750 transect visits contributing many thousands of volunteer hours to greatly improve our knowledge of this species.
21. Heath Hands has been also contributing by providing practical habitat works including managing habitats and the creation of specific snake breeding sites through the placement of compost piles at suitable locations. In early 2024 volunteers discovered the remains of hatched grass snake eggs on one of these piles indicating the success of these habitat creation schemes (Figure 8). The core population of these snakes remains in the enclosed Hampstead Heath areas where public disturbance is reduced, indicating the importance of these areas for Heath biodiversity.

Odonata: dragonflies and damselflies

22. Systematic dragonfly monitoring on Hampstead Heath began in 2006 with the engagement of a specialist dragonfly recorder. Surveys were undertaken between 2006 and 2010, and 16 species were recorded across Hampstead Heath ponds with 15 of these species thought to be regular breeders.
23. In 2017, monitoring was re-established but brought in house. The Ecology Team provided training for four Heath Hands volunteers who began systematic recording of the ponds. This recording has remained in place and is now co-ordinated by the Heath Hands organisation with recording taking place every three to four weeks by volunteers.
24. Thanks to this recording effort, the volunteers picked up a new species for the Heath in 2018: willow emerald damselfly. This species has expanded its range and found the Hampstead Heath ponds provide suitable habitat with willow-edged ponds providing its preferred egg-laying habitat. Willow emerald damselfly is now widespread across Hampstead Heath. (Figure 9)

25. Further new species have since been recorded in both 2023 and 2024, with records of hairy dragonfly in 2023 and this year's records of lesser emperor dragonfly and Norfolk hawk dragonfly. It is not yet clear whether these species will become regular breeders on Hampstead Heath.
26. These recent records have increased the number of species recorded on Hampstead Heath from 16 in the period 2006-2010 to 20 within the last five years; 16 of these species are thought to be regular breeding species. The level of recording currently undertaken would not be possible without the dedication of volunteers. (Table 1)

Butterflies

27. Hampstead Heath has been involved in the United Kingdom Butterfly Monitoring Scheme (UKBMS) since 1977 and was one of the first participants (the scheme began in 1976) in the country. Hampstead Heath conservation staff continue to undertake this monitoring on a weekly basis throughout the spring and summer.
28. In 2019, a second transect was begun by Heath Hands volunteers in coordination with the Ecology Team with the aim of covering a wider area of Hampstead Heath than was covered by the existing transect. A third transect covering the English Heritage managed Kenwood estate was reinstated in 2022 by Heath Hands after being lapsed for many years.
29. 30 species of butterfly have been recorded on Hampstead Heath with 22 species thought to breed here regularly. Heath Hands volunteers recorded 24 species in 2023 and made over 1400 butterfly records greatly increasing the knowledge of butterfly species across Hampstead Heath. (Table 2)
30. Purple emperor butterflies have been seen displaying at a high vantage point on Hampstead Heath periodically over the last 10 years and a few adults have been recorded on the ground. The male butterflies use these high vantage points to seek out mates and so Hampstead Heath's topography is likely to be aiding this species. As adult females can travel many miles to lay eggs it is not clear whether the species is egg laying here, but its preferred egg-laying sites of willow plants are common on Hampstead Heath and so management of willow trees will take this into account.
31. Species such as brimstone only became common on the Heath in the last 20 years after the planting of its foodplant, alder buckthorn, by the Heath's conservation team. Common blue has also become more regular over the last 10 years after the increase in bird's foot trefoil through wildflower meadow

creation. One such meadow-creation project was undertaken in 2023 at the Heath Extension with thanks our partners at the Big City Butterflies Project, run by Butterfly Conservation.

32. In 2024, thanks to a dedicated member of public carrying out extensive searches of the Heath's blackthorn thickets, brown hairstreak eggs were recorded for the first time on Hampstead Heath. Eggs were recorded in blackthorn hedges from the Heath Extension to Parliament Hill Fields and, although in low numbers, it is hoped this species becomes established on the Heath. These records are important in tailoring management to ensure that cutting and damage to possible egg-laying sites is carefully undertaken. (Figure 10)

Moths

33. Well over 500 species of moth have been recorded on Hampstead Heath or within close vicinity. Much of the credit for these records was down to a local resident who recorded moths from his nearby flat from 1966-2011.
34. Further intensive monitoring was carried out between 2019-2021 to identify a modern species list for the Heath. A specialist recorder was engaged from the Middlesex and Herts Moth Group, who undertook 15 nights of surveying alongside the ecology team. Despite being hampered by issues related to Covid-19 and bad weather, 377 species were recorded during this period with 340 species recorded during 2019 alone. Recording did not take place in late autumn or winter and so seasonal specialists would also have been missed. Several new records for Hampstead Heath and indeed the surrounding 10km square were made, including the heathland specialist true lover's knot. Only 340 species had been recorded on the Heath and near vicinity between 2001-2011, so to have 340 so far from a single year shows the continued importance of Hampstead Heath for lepidoptera.
35. Two new moth species for the Heath were recorded in 2023: the hornet moth (Figure 11) and six-belted clearwing. With the inclusion of the day-flying species and late-autumn and winter species, it is thought that 400 species of moth are present on Hampstead Heath. The Heath conservation team continues to carry out moth light trapping during the summer months.

Financial implications

36. No implications.

Resource implications

37. No implications.

Legal implications

38. No implications.

Risk implications

39. Risks are monitored and recorded through the various risk registers, including the Division and Departmental Risk Registers.

Equalities implications

40. No implications.

Climate implications

41. Included within the business plan for 2024-25 are a series of projects which contribute towards achieving the City Corporation's Climate Action Strategy, which was launched in October 2020. A key part of the strategy is conserving and enhancing biodiversity alongside reducing carbon emissions.

Security implications

42. Security implications are monitored and recorded through the Departmental Risk register

Conclusion

43. This report provides Members with an update on monitoring undertaken on groups of Hampstead Heath fauna over the last 10 years.

Appendices

- Appendix 1: The Fauna of Hampstead Heath- Figures

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