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Bearing with noise: the effects of highway noise on behaviour and development in zebra finches

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Citation

Liu, Q. (2021, June 2). *Bearing with noise: the effects of highway noise on behaviour and development in zebra finches*. Retrieved from <https://hdl.handle.net/1887/3180750>

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Issue Date: 2021-06-02

The effects of highway noise on behaviour and development in zebra finches

- 1) Past and recent experiences affect noise avoidance behaviour in zebra finches (this thesis).
- 2) Zebra finches avoid playbacks of high but not low intensity traffic noise in spatial preference tests in the laboratory. Such an intensity-based avoidance mechanism could explain why birds avoid habitats alongside roads (this thesis).
- 3) Breeding zebra finches change aspects of their parental behaviour when exposed to traffic noise. Such changes might be a compensatory strategy to mitigate detrimental effects from noise on their offspring (this thesis).
- 4) Zebra finches raised in noise tolerated higher levels of noise shortly after being released from noise. However, this noise tolerance was not permanent, suggesting that growing up in noisy areas may not necessarily help birds adapt to noise (this thesis).
- 5) The associations of specific behavioural traits in so called behavioural syndromes may vary among songbird species.
- 6) The aversive effects from both noise and chemical pollution could amplify each other and thus exacerbate the reduction of wildlife populations near roads.
- 7) To mitigate the effects of anthropogenic noise on animals, we need to understand both the short- and long-term effects of noise exposure (*sensu* Kight & Swaddle 2011, *Ecology Letters*, 14:10).
- 8) That birds appear and breed in areas with human-induced environmental changes might result from a lack of better options.
- 9) The stimuli for long-term noise exposure studies should first be tested in short-term experiment(s) to ensure that the test subjects respond differently to control and treatment stimuli.
- 10) Algorithm-based programs like automatic song detection and automatic video tracking can raise the statistical power of behavioural studies and thereby reveal otherwise hidden patterns.
- 11) To prevent biodiversity decline, an integrated approach should address the potential for additive effects of multiple anthropogenic influences.
- 12) Nutritional essences deconstructed from a superficially diversified lunch improve life quality and happiness among certain PhD candidates.