

The “Landgull”: how important is terrestrial food for Lesser Black-backed gulls *Larus fuscus* in Belgium, and are there consequences to this diet?

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Human action has benefited a range of opportunistic species through the mass production of food waste. Urban and industrial garbage, together with fishery discards, have provided the Lesser Black-backed Gull (*Larus fuscus*) with an opportunity to thrive along the coasts of the North Sea, and increasingly inland. Fishery discards are one of the main food sources exploited by this species in Belgium during the breeding season (May to July), but these are bound to gradually disappear due to changes in fishery practice induced by European legislation. Lesser Black-backed gulls breeding in the region will soon be left with mostly terrestrial options to feed their chicks. Given this scenario, our research addresses the following questions: how abundant is terrestrial food in the current diet of local *L. fuscus* chicks? Does raising a Lesser Black-backed Gull chick on a fully terrestrial diet have consequences on its growth and condition? Is it plausible that the Lesser Black-backed Gull population breeding in Belgium will be fully dependent on terrestrial food in the near future?

Results from aviary experiments evidence that it is possible to fully raise a Lesser Black-backed Gull chick on terrestrial food. This, however, comes at the cost of delayed growth curves that may affect winter survival rates. The proportion of terrestrial to marine food currently comprising the diet of *L. fuscus* chicks raised in the Port of Zeebrugge was assessed at different ages by means of stable isotope analysis. These proportions in chick diet are compared to foraging patterns of their parents, obtained by GPS tracking of adult birds, to assess time and energy costs implied in obtaining each type of food. The high adaptability of both chicks and breeding adults to exploit varying sources of food shows that gulls may dispense with fishery discards and still thrive locally, as long as terrestrial food remains largely available at low foraging costs.

Keywords: gulls; fishery discards; garbage; breeding; aviary experiments; stable isotope analysis