



Letter to the Editor

Reply to Kumschick and Nentwig (2010, 2011): Promoting a robust cost-benefit approach for conducting impact risk assessments of invasive species

Recently, we reviewed the impact risk scoring of five invasive birds considered as the worst avian invaders in Europe by Kumschick and Nentwig (2010, K&N). We raised several concerns (Strubbe et al., 2011). First, whereas K&N claim their risk assessment is “based on scientific data”, the literature cited to support their scoring often contains observational or even anecdotal information only. Second, K&N consider only negative economic and biological effects, ignoring potential positive effects. Third, K&N do not take the societal context in which invasions take place into account, which risks failing to engage the public. Despite these shortcomings, K&N draw strong conclusions and state that “Birds are mostly excluded from eradication programmes so far. This is scientifically not justified at all”. However, in a reaction, K&N (this volume) seem to brush aside our concerns.

K&N aimed to provide a first indication regarding which non-native birds currently pose the greatest threats. This exercise is inevitably hampered by a lack of autecological studies on non-native birds, and K&N misrepresent our views when writing they “do not agree with the claim that anecdotal and observational data should be ignored”. Instead, we argued that “hypotheses or anecdotal observations may be used as they can present the only information available”. We however did stress that the poor quality of the evidence underlying most alleged impacts should be explicitly acknowledged before recommending eradication. We also think that it is problematic to refuse to consider possible beneficial effects of non-natives (Schlaepfer et al. 2011), and disagree with their claim that due to the lack of studies, impacts are more likely to be underestimated than overestimated. In contrast, several studies have indicated that a bias against non-natives has resulted in an emphasis on documenting negative effects (e.g. Schlaepfer et al. 2011). Lastly, since birds are charismatic and often favourably looked upon, we believe that actions, and particularly eradication, based on preliminary scientific data could result in a public backlash and negatively influence conservation efforts.

Therefore, we are convinced that further assessment should be based on a cost-benefit approach in which both negative and positive effects of non-natives are enumerated, taking into account the subjective valuation of species by different stakeholders (scien-

tists, managers and the general public). Also, impact assessments of non-natives should not be separated from those of native species: assessment plans for invasive species should be made in congruence with impacts of native species present in the same environment (e.g. species spreading due to human activity) to make a valuable ranking of which species that pose the greatest risk to economy and biodiversity. In that sense, we agree with Davis et al. (2011) who argue that species should not be judged solely on their origin.

Only by considering the full scope of economic, social and environmental consequences of invasions can we arrive at sound conclusions and avoid sending mixed messages to managers and the general public.

References

- Davis et al. 2011. Don't judge species on their origins. *Nature* 474, 153–154.
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