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COMMENTARY

# A novel public–private partnership model for improving the listing of endangered species

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**Abstract** Endangered species conservation faces well-documented funding shortfalls for recovery activities, but the listing process itself is also often hampered by limited resources at the federal, state, and provincial levels. In the United States, Canada, and other jurisdictions, the number of species proposed for listing has outpaced listing decisions, creating large backlogs of candidate species. In Washington State, the Washington Department of Fish and Wildlife (WDFW) and The SeaDoc Society (SeaDoc), a nongovernmental university-based organization, entered into a unique public–private partnership to advance the state-level listing process for the tufted puffin (*Fratercula cirrhata*), a candidate species since 1998. Using privately-raised funds, SeaDoc hired a visiting scientist to co-author the status report with WDFW staff. This collaboration continued through editing, revising, peer review, and the public comment period, and resulted in the tufted puffin being listed as endangered in Washington. We discuss the advantages and potential pitfalls of this joint effort, as well as the broad applicability of this model in other jurisdictions with a backlog of species awaiting endangered species listing consideration.

**Keywords** Collaboration · Endangered species · Funding · Listing · Policy · Tufted puffin

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## Introduction

Global targets for safeguarding vulnerable species face a projected order-of-magnitude funding shortfall by 2020 (McCarthy et al. 2012). In the United States, species listed under the federal Endangered Species Act (ESA) receive less than 20 % of the funds estimated as necessary to support recovery efforts (Miller et al. 2002), and the listing process itself is also grossly underfunded (Stokstad 2005). In 2014, for example, the United States Fish and Wildlife Service (FWS) began and ended the year with a backlog of 146 candidate species awaiting listing decisions under the federal ESA (FWS 2014), and received petitions to consider the listing of twenty-one new species (FWS 2015). Other countries also report significant challenges in the funding and implementation of their endangered species laws, including Canada (Otto 2015) and Australia (Watson et al. 2010). In spite of these shortfalls, and although long-term monitoring data are often lacking (Gibbs and Curie 2012), vulnerable plants and animals appear to benefit from ESA listing (Miller et al. 2002; Taylor et al. 2005; Schwartz 2008; but see Gibbs and Curie 2012). Positive correlations have been found between population trends and funding levels (Miller et al. 2002), critical habitat designations (Taylor et al. 2005), and the implementation of single-species recovery plans (Schultz & Gerber 2002; Taylor et al. 2005). In addition to the federal ESA, 92 % (n = 46) of individual states in the United States have enacted legislation protecting vulnerable species. Like the federal ESA, many state programs also face funding shortfalls (George and Snape 2010), limiting or delaying implementation and creating a backlog of species awaiting listing decisions. Here we describe a novel public–private model to address species listing backlogs, using a charismatic and declining seabird species as a case study.

Washington State law provides a clear legal framework for the state-level listing and recovery of vulnerable species (WAC 2015). Candidates for listing are evaluated in a status report that reviews all scientific information relevant to the species in Washington (e.g. population trends, natural history, threats, habitat status). If listing is warranted, the report recommends a classification at one of three levels: endangered, threatened, or sensitive. Final listing decisions are made by the Fish and Wildlife Commission, a citizen panel that oversees the Washington Department of Fish and Wildlife (WDFW), the agency charged with managing species listings and subsequent recovery efforts.

Between 1990 and 2014, twenty-seven status reports were prepared in Washington, resulting in the listing of ten species as endangered, seven as threatened, and eight as sensitive, while two species were removed from listed status entirely. During the same period, however, additions to the candidate list outpaced status report preparation, resulting in a backlog of 112 candidate species awaiting listing decisions. Constraints on the listing process stem primarily from limited staffing resources, compounded by the disproportionate time required to develop recovery strategies for controversial listed species (e.g. gray wolf, *Canis lupus*). Over the past nine budget years, flat or declining funding for the WDFW Wildlife Program Diversity Division, which is tasked with endangered species listings and recovery implementation, has delayed status report preparation as well as recovery activities, monitoring, and public education and outreach. Even with efforts to streamline the preparation of status reports, processing the backlog of candidate species presents a considerable and ongoing challenge. Furthermore, populations of some species appear to have declined during their long tenure on the candidate list, causing concern both within and outside the agency.

Historically, public–private partnerships for endangered species conservation have focused on recovery, providing funding and frameworks for habitat preservation (Fox and Nino-Murcia 2005), reintroductions or population augmentations (Conde et al. 2011), research and monitoring (Groves et al. 1995), and the management of populations on private lands (George and Snape 2010). Partnerships have also been developed to manage at-risk species proactively and avoid the need for endangered species listing (e.g. FWS Candidate Conservation Agreements with Assurances; FWS Partners for Fish and Wildlife Program). A recent collaboration among federal agencies, state agencies, and non-governmental organizations, for example, provided conservation alternatives to listing populations of greater sage grouse (*Centrocercus urophasianus*) across several western states (Kershaw et al. 2015).

Direct private support for the listing process itself, however, is unusual. While non-governmental organizations often petition public agencies to have a species listed (Greenwald et al. 2005), we are unaware of other collaborative efforts in the United States or elsewhere for the preparation of documents required to make a federal or state-level listing decision. Recognizing the need for new models, in 2010 we established a unique public–private partnership to write the state-level status report for the tufted puffin (*Fratercula cirrhata*), a candidate species in Washington since 1998. Puffins are iconic seabirds that have suffered widespread colony abandonment and an order of magnitude population decline in Washington over the last thirty years (Hanson and Wiles 2015). Widespread concern about this popular species made it an ideal test case for raising private funds to support a public policy process.

## The partnership

The SeaDoc Society (SeaDoc) is a nonprofit university-based organization that uses science to find solutions to problems facing marine ecosystems. Its work focuses on the Salish Sea, an inland sea extending from Olympia, Washington, to Campbell River, British Columbia, Canada. Tufted puffins were once common breeding residents in parts of this region, as well as along the outer coast of Washington, but are now greatly reduced. At a regional seabird research meeting in 2005, the declining status of tufted puffins was one of multiple concerns identified as requiring action (Gaydos 2005). Follow-up conversations between SeaDoc staff, WDFW biologists, and WDFW senior administrators revealed that all sides considered tufted puffins a priority, but funding limitations, primarily in the form of limited staff time, were delaying the preparation of the status report indefinitely. SeaDoc proposed raising private funds to hire a visiting scientist to help research and co-author the tufted puffin status report. The Wildlife Diversity team at WDFW agreed to this proposal with two caveats: (1) listing was not a forgone conclusion; and (2) the report would be subject to the same rigorous standards for review and scientific integrity as all other WDFW status reports. With this understanding, the project advanced toward shared goals on a verbal commitment of partnership.

In May and June 2010, SeaDoc's Chief Scientist (Gaydos) undertook a major donor campaign to fund salary for a visiting scientist. Direct asks of known donors secured two anchor donations, one for $23,000 and one for $10,000. Building on that momentum, additional donations were solicited via social media and an established electronic newsletter distributed monthly to over 2000 SeaDoc supporters. From the start, SeaDoc made it clear that funds would specifically support the writing of a status report per existing

state-level listing procedures, a process that did not guarantee any particular listing outcome. By the end of the fundraising campaign, a total of $44,200 had been raised from 7 individuals, with contributions ranging from $100 to $23,000.

In November 2010, the visiting scientist (Hanson) was hired and began coordinating with the lead WDFW staff person assigned to the project (Wiles). Hanson spearheaded the data compilation, literature review, and writing of the initial draft, and then Wiles led the revision process, including review within WDFW, external peer review, and a 90-day public comment period. Wiles and Hanson maintained close contact by email and phone throughout the revision process, sharing authorship and exchanging many working drafts. The final report incorporated comments from 11 WDFW reviewers and 10 outside experts, and included 18 comments from the public (Hanson and Wiles 2015). Based on exhaustive review of available data, and with input from agency staff, outside experts, and the public, the final report recommended listing tufted puffins as endangered in Washington.

## Discussion and conclusions

The Washington Fish and Wildlife Commission voted unanimously to list tufted puffins as endangered in Washington on April 10, 2015. Both WDFW and SeaDoc considered this collaboration a success, and felt that it significantly accelerated the listing process. It marked the first completed status report and species listing in Washington in eight years, and also created significant momentum within WDFW to begin work on the tufted puffin recovery plan, a process that will begin in 2016.

Three main elements made the partnership effective: (1) it provided additional staff resources to the limited WDFW Diversity Division; (2) it reduced the WDFW staff time necessary to produce the status report; and (3) it created momentum, both within WDFW and at SeaDoc, to push the process along to completion. The multiple steps between candidate status and a listing decision provide opportunities for the process to become stalled, particularly when other priorities put demands on limited staff time. Having both SeaDoc and WDFW contributing to and following the process helped keep the tufted puffin report moving forward. A written contract would have provided additional accountability, though in this case the high level of trust between WDFW and SeaDoc staff allowed the partnership to succeed without one.

One potential drawback to this partnership model lies in the possibility that a private organization could exert undue influence on a public process. In some jurisdictions, legal or regulatory considerations exist to forestall this possibility, potentially limiting the application of the model. The Federal Advisory Committee Act (FACA), for example, prevented the FWS from using a collaborative scientific report in listing deliberations for the Alabama sturgeon (*Scaphirhynchus suttkusi*) in 1994 (Scharpf 2000). While FACA applies to committees rather than the direct partnership described here, and we are unaware of any specific regulations that would limit the use of our model, even the perception of advocacy opens the door to criticism and risks tainting the reception of the final product. It is therefore imperative for the non-government partner to maintain a strict focus on the science and on the process itself, with no preconceived concept of the outcome. It should also be clear that the agency maintains the lead role in the listing process, following all applicable protocols and provisions. All non-government staff should have expertise, training and credentials on par with their agency partners, and the products of the partnership should be fully and demonstrably co-authored. It is also vital for reports to be fully

vetted within the agency and comparable in style, format, and quality to other agency publications. We feel the tufted puffin example met this standard of objectivity. All parties shared the goal of reviewing available science and coming to a recommendation, not of achieving a particular listing designation. In fact, early drafts of the status report recommended a lower "threatened" status for tufted puffins. Only through revision and full review within WDFW did more data come to light justifying a recommendation of endangered.

Perhaps the best measure of the partnership's success, however, lies in the likelihood that it will be repeated. Both WDFW and SeaDoc consider this model a good tool for preparing additional status reports and helping reduce the backlog of candidate species. The model is already being used again to support writing the status reports for Clark's (*Aechmophorus clarkii*) and western (*A. occidentalis*) grebes. In an era when threats to species are high and funding is limited, this public–private partnership from Washington offers a promising new option to facilitate the endangered species listing process in any jurisdiction. It integrates science, funding, and policy—necessary ingredients in any successful conservation effort. We suggest that other states and provinces facing listing backlogs consider using this model, and stress the importance of transparency so that all parties, including the public, understand that external funding does not influence the scientific standards and merit of the work, or the final listing decision.

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