#### LETTER



## Support for the U.S. Endangered Species Act over time and space: Controversial species do not weaken public support for protective legislation

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#### Abstract

We used data from a 2014 survey (n = 1,287) of U.S. residents and recent polls to assess how public support for the U.S. Endangered Species Act (ESA) changed over time, and whether protecting controversial species affects support for the law. We assessed support for the ESA, trust in the U.S. Fish and Wildlife Service (FWS), and attitudes toward wolves across three regions with different experiences in conserving gray wolves through the ESA. We found: (a) ~4 in 5 Americans support the ESA, whereas ~1 in 10 oppose; (b) support for the ESA remained stable over the past two decades; (c) strong majorities (>68%) of individuals identifying with 8 special interest types support the ESA; and (d) no differences in support for the ESA, attitudes toward wolves, or trust in the FWS across regions. Results suggest that protecting species even controversial predators—does not weaken support for protective legislation.

## KEYWORDS

attitudes, Endangered Species Act, interest groups, politics, public opinion, public policy, wolves

## 1 | INTRODUCTION

Effective conservation of biodiversity depends on legislation designed to protect biodiversity. Likewise, achieving the goals of such legislation depends on political and social forces that affect its implementation (e.g., Chapron, Epstein, Trouwborst, & López-Bao, 2017). Widespread public opposition to such legislation, for example, could promote efforts to weaken protective legislation or thwart its implementation and enforcement. Thus, understanding factors that impact public support for such legislation is critical to meeting long-term conservation goals. To that end, we examine support for the U.S. Endangered Species Act, 1973 (ESA).

In 1973 the U.S. Congress passed the ESA to provide for the conservation of species (16 U.S.C. § 1531). The ESA

passed with widespread bipartisan support, supplanting two prior laws deemed inadequate for conserving species (Enzler & Bruskotter, 2009; Freyfogle & Goble, 2009). The ESA explicitly acknowledges that numerous species were "rendered extinct as a consequence of economic growth and development" and sought to provide a means of mitigating these circumstances. However, it quickly became clear that any limitations on economic opportunities could be controversial. In the decades since its passage, the ESA has become a focal point in conflicts pitting species of conservation concern against economic interests (Goble, 2005; Meltz, 1994; Plater, 2004).

Accordingly, the idea that the ESA is increasingly controversial has become a common feature of environmental news media coverage. For example, in June of 2017,

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National Public Radio introduced a story about recovery of the Wyoming toad (Anaxyrus baxteri) asserting, "The Endangered Species Act is facing a growing number of calls for significant changes" (McKim, 2017), and that same month, The Hill reported that "the battle over the Endangered Species Act has reached a fever pitch" (Clark, 2017). This idea is echoed by conservation professionals. At a recent meeting of The Wildlife Society (a professional society that certifies wildlife biologists), Mathews (2017) asserted, "Over the past 10 years...the Act has seen declining public support, in part due to growing concern over states' rights, constraints on economic growth and development, and costs involved in protecting species and their habitat."

The empirical basis for claims that the ESA is increasingly controversial among the general public is unclear. This claim appears to emerge from interest groups and influential members of the U.S. Congress who manifest strong opposition to the Act. Congressional opposition is apparent, for example, in legislative proposals to amend the ESA directly, as well as the use of riders (bills attached to unrelated legislation) to block protections for certain species. Recent examples include an amendment to a defense bill in 2015 that blocked the listing of the greater sage-grouse (Centrocercus urophasianus) and a 2011 budget resolution rider that removed protections for gray wolves (Canis lupus) in the Northern Rocky Mountains. Recent analyses indicate that Congressional actions designed to weaken the Act or its implementation increased substantially over the past two decades (Pang & Greenwald, 2015).

Efforts to revise the ESA have not been limited to Congress, but also include administrative actions aimed at its implementation. For example, the FWS and National Marine Fisheries Service (NMFS) recently promulgated a new rule concerning the interpretation of the phrase "significant portion of its range" (Waples et al. 2015)—a key phrase in the Act that determines what constitutes endangerment (Vucetich, Nelson, & Phillips, 2006). This rule effectively redefines endangerment in a way that is likely to dramatically lower the standards for what counts as an endangered species and what is required for species recovery (Nelson, Vucetich, & Bruskotter, 2016). Importantly, the use of administrative policy and other nonlegislative mechanisms to weaken biodiversity protections is not limited to the United States, but may be an emerging global phenomena (Chapron et al., 2017).

These and other efforts to amend the ESA and revise associated administrative policy imply that some significant segment of the American public opposes such protections. But who—and why? One explanation lays blame on prolonged protection for controversial species. In November of 2015, 14 scientists wrote to the U.S. Secretary of the Interior (who is responsible for administering the ESA) expressing their belief that wolves no longer require ESA protections, and that

continued listing "creates public resentments toward the species [wolves] and the ESA" potentially threatening the "integrity and effectiveness of the ESA" (Mech et al., 2015). Although plausible, the idea that the long-term protection of controversial species under the ESA undermines support for the law act is as yet untested.

## 1.1 | Research questions

Collectively these circumstances suggest: (i) support for the ESA among Americans may be declining and and (ii) listing/delisting of controversial species may be impacting support for the ESA. Our study seeks to interrogate these ideas using nationally representative surveys and polling data. Specifically, we address the following questions: (i) To what extent do Americans support or oppose the ESA? (ii) Has support for the ESA changed over time? (iii) To what extent is opposition to the ESA associated with one's identification with various special interests? Finally, (iv) we evaluate the idea that long-term listing of controversial species increases opposition to the ESA, negatively affects trust in agencies charged with its implementation (i.e., FWS, NMFS), and creates resentment toward the species being protected.

### 2 | METHODS

We commissioned a survey (n = 1,287) of adult residents of the United States conducted by the GfK Group. The study used GfK's Knowledge Panel®, which is composed of randomly selected panelists, that were selected via an address-based sampling method (Baker et al., 2010). GfK's sampling methodology is designed to improve population coverage, providing better representation of populations that have been traditionally harder to reach with surveys (e.g., young adults, minorities). For example, to alleviate problems in coverage associated with lack of internet access, GfK provides webenabled devices and free internet services to panelists who lack internet access (for more details, see Supplementary Materials).

To test the idea that long-term listing of gray wolves has reduced support for the ESA and decreased trust in the FWS, we sampled three regions with different experiences in protecting gray wolves under the ESA, the: (i) Northern Rocky Mountains, (ii) Western Great Lakes Region, and (iii) remainder of the United States (Figure 1). Our goal was to obtain at least 400 responses per region. Because controversies about ESA protections of wolves also exist for Mexican wolves (*Canis lupus baileyi*), which reside in a small portion of New Mexico and Arizona, and red wolves (*Canis rufus*), which reside in a small portion of North Carolina, we filtered out cases from these three states (n = 23). We also removed cases from Alaska (n = 4), which has an unlisted population of

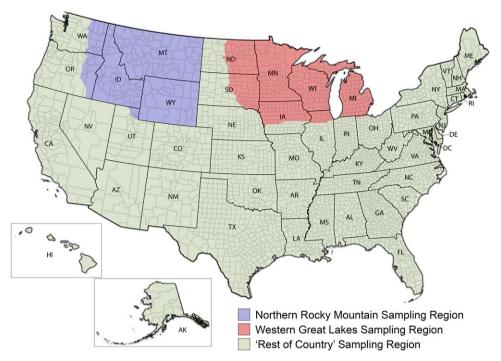


FIGURE 1 Sampling regions for the 2014 study were defined by gray wolf recovery zones (i.e., Northern Rocky Mountains, Western Great Lakes) delineated by the U.S. Fish and Wildlife Service

wolves, and Hawaii (n = 4), which has never been inhabited by wolves, when making comparisons across regional strata.

We collected responses using Qualtrics, an online survey platform. Over an 11-day period in February of 2014, GfK invited 2,020 panelists to participate in the study, which resulted in 1,287 completed questionnaires (response rate = 63.7%). For the present analyses, responses were weighted post hoc to represent the general U.S. population on several sociodemographic characteristics using benchmarks from the 2009–2011 American Community Survey, which is conducted by the U.S. Census Bureau. (For validity of weighting procedures to obtain accurate estimates from online samples, see Yeager et al., 2011.)

Additionally, we gathered basic response frequencies from previously published studies and public polling conducted at the national level. Although we found numerous studies and polls that reported on support for or attitudes toward the ESA, only four contacted nationally representative samples (see Supplementary Materials for details).

## 3 | RESULTS

## 3.1 $\perp$ Trends in support for and opposition to the ESA

Our review identified two polls and two studies (including our own), spanning two decades (1995–2015) that explicitly address support for the ESA with nationally representative samples. Despite minor differences in response items, results appear remarkably consistent across these studies. Support varied from a low of 79% (±3 points, 95% CI) in 2014 to a high of 90% (±4 points, 95% CI) in 2015; opposition varied from a high of 16% (±4 points, 95% CI) in 1996, to a low of 7% (±4 points, 95% CI) in 2015 (Figure 2). Because of the differences in item wording and response categories, we refrained from conducting formal statistical tests. However, the margins of error surrounding the estimates of opposition in the oldest (1996) and most recent (2015) studies do not overlap—suggesting that opposition to the ESA has decreased over the past two decades.

# 3.2 | Support for the ESA among special interests and political ideologies

Next, we examined the extent to which individuals' identifications with various types of special interests are associated with support for the ESA. Results indicate that within all interest group types majorities (>68%) expressed support for the Act (Table 1). Support was higher than average (79%) among self-identified environmentalists, animal rights advocates, conservationists and wildlife advocates, and lower than average among self-identified gun rights advocates, farmers/ranchers, hunters, and property rights advocates. Those who identified as ideologically liberal expressed greater than average support for the ESA, whereas those who identified as ideologically conservative expressed less than average support for the ESA. Measures of interest group identification were weakly

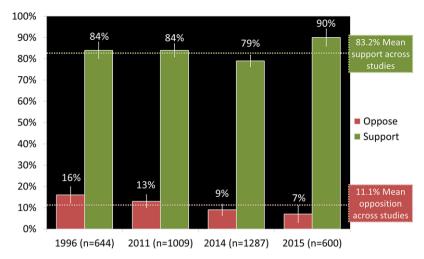


FIGURE 2 Americans' support for and opposition to the U.S. Endangered Species Act of 1973 (1996–2015). Error bars represent sampling error. For the 1996 study, the item used to assess support was, "In the best interests of the nation, the Endangered Species Act should be... Revoked, weakened to provide less protection to species, remain unchanged, strengthened to provide more protection to species." For the remaining studies, the item used to assess support was "As you may know, the Endangered Species Act is an environmental law established to protect all wildlife, plants, and fish that are in danger of extinction. Based on what you know, would you say that you strongly support, somewhat support, somewhat oppose, or strongly oppose the Endangered Species Act?" Note: In some cases support and opposition do not total 100% due to "neutral" or "don't know" response options

TABLE 1 Support for and opposition to the U.S. endangered Species Act1 by Interest Group Identity and Political Ideology (2014)

Grouping variable	Support	Neutral	Oppose	Pearson's R
Interest group <sup>2</sup>				
Environmentalist ( $n = 326$ )	91.7%	4.9%	3.4%	0.33***
Animal rights advocate ( $n = 225$ )	90.2%	4.4%	5.3%	0.30***
Conservationist ( $n = 344$ )	88.4%	3.8%	7.8%	0.19***
Wildlife advocate ( $n = 246$ )	87.0%	4.5%	8.5%	0.22***
Gun rights advocate ( $n = 380$ )	71.3%	11.8%	16.8%	-0.20***
Farmer/rancher $(n = 289)$	71.3%	9.3%	19.4%	-0.07**
Hunter $(n = 222)$	73.0%	7.7%	19.4%	-0.15***
Property rights advocate ( $n = 344$ )	68.6%	10.2%	21.2%	-0.21***
Political ideology <sup>3</sup>				-0.29***
Liberal ( $n = 276$ )	89.5%	6.9%	3.6%	
Moderate $(n = 408)$	77.2%	19.4%	3.4%	
Conservative $(n = 570)$	73.7%	11.2%	15.1%	
All cases	78.5%	12.9%	8.6%	

<sup>&</sup>lt;sup>1</sup>Data were weighted to represent the United States population using social and demographic benchmarks from the U.S. Census Bureau's American Community Survey; see Supplementary Materials for details.

to moderately correlated with support for the ESA (absolute Pearson's R values ranged from 0.07 to 0.33). Support was most strongly negatively associated with political conservativism (r = -0.29), and most positively associated with identification as an animal rights advocate (r = 0.30) and environmentalist (r = 0.33).

## 3.3 | Controversial listings and the ESA

We evaluated the idea that long-term listing of controversial species (a) reduces support for the ESA, (b) reduces trust in the agencies charged with administering the Act, and (c) generates animosity toward the species that is protected. If the

<sup>&</sup>lt;sup>2</sup>Respondents were asked "To what extent do you identify with each of the following groups." Response categories included: "not at all, slightly, moderately, strongly, very strongly." We classified individuals as belonging to a group if they selected "strongly" or "very strongly." Note that group response categories are note discrete (respondents were allowed to identify with multiple groups).

<sup>&</sup>lt;sup>3</sup>Respondents were asked "When it comes to politics, please indicate which of the following you consider yourself?" Response categories included extremely liberal (1), liberal (2), slightly liberal (3), moderate/middle of the road (4), slightly conservative (5), conservative (6), and extremely conservative (7).

 $p \le 0.01; ***p \le 0.001.$ 

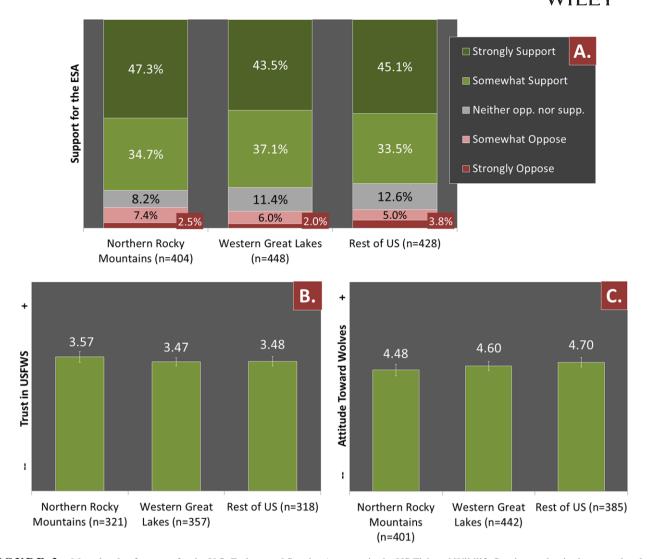


FIGURE 3 Mean levels of support for the U.S. Endangered Species Act, trust in the US Fish and Wildlife Service, and attitudes toward wolves, by sampling region. Trust in the FWS was assessed by averaging responses across four items that asked respondents the extent to which the agreed or disagreed that the U.S. FWS (i) "shares similar values as me," (ii) "takes similar actions as I would," (iii) "is trustworthy in their management of wildlife within the United States," and (iv) "is capable in the management of wildlife in the United States." Items were measured on a 5-point, bipolar scale ranging from "strongly disagree" (1) to "strongly agree" (5), and reliability was high ( $\alpha = 0.92$ ) for the scaled measure. Attitudes toward wolves were assessed by averaging responses from four sets of paired adjectives with seven response categories. Respondents were prompted with the text, "Generally speaking I think wolves are..." and then asked to select the appropriate score ranging from 1 (harmful, unpleasant, worthless, bad) to 7 (beneficial, pleasant, valuable, good). Reliability for this 4-item scale was high ( $\alpha = 0.92$ ). Note: analyses reported here excluded residents of Alaska, Arizona, Hawaii, New Mexico, and North Carolina

listing of controversial species contributed to the erosion of support for the ESA, then we should expect to find differences in support for the ESA across study regions (because these regions have different histories of ESA protections). Moreover, we might also expect regional differences in trust in the FWS and attitudes toward wolves. However, results of Fisher's exact tests indicate that neither opposition nor support for the ESA differed significantly across these geographic regions (fishers' exact = 9.78, 99% CI, p = 0.27–0.29; Figure 3). Likewise, one-way ANOVA tests indicate that neither respondents' (i) trust in the FWS nor their (ii) attitudes toward wolves varied across these regions (F = 1.271, df = 2,

p = 0.30 and F = 2.22, df = 2, p = 0.11, respectively; see Figure 3).

### 4 | DISCUSSION

The news media in the United States consistently depicts the ESA as increasingly controversial. If that were the case, we would anticipate a polarized response in public polling (i.e., a bimodal distribution favoring the "strongly support" and "strongly oppose" response categories). However, our results find strong support for the ESA, which has persisted for at

least the past two decades and transcends political ideology. Indeed, we found less than 10% of the population expressed opposition to the Act (Figure 1). These data do not support the assertion that the ESA is controversial; rather, they support the opposite conclusion.

Nevertheless, Congressional efforts to weaken the ESA appear to be increasing (Pang & Greenwald, 2015). Although recent efforts have thus far failed to amend the statute itself, the ESA has been meaningfully revised through Administrative rule-making, such as the recent adoption of a new policy for interpreting the phrase "significant portion of its range" that has profound implications for species listing and recovery (Greenwald, 2009; Nelson et al., 2016).

Given broad support for the ESA among the American public—support that transcends, for example, political ideology; it is tempting to conclude that efforts to weaken the ESA are driven by special interest groups. Indeed, various interest groups have expressed formal opposition to the ESA's protective provisions, citing, for example, restrictions on the rights of property owners or effects on agriculture. But our data indicate that individuals who self-identify with these special interests are largely supportive of the ESA. Thus, though interest groups continue to oppose the ESA, or at least some of its protective provisions, our data suggest that their opposition may not be broadly shared among their members.

Some insight into this disconnect is provided by research demonstrating that the leadership of interest groups tend to hold more extreme positions than their constituents (Nilsen et al., 2007). Additional insight is provided by a quantitative analysis of nearly 1,800 American policy issues, which led researchers to conclude that "economic elites and organized groups representing business interests have substantial independent impacts" on federal policy, "while average citizens and mass-based interest groups have little or no independent influence" (Gilens & Page, 2014, p. 564).

Similarly, a recent analysis of congressional voting behavior on environmental issues found that the odds of pro-environmental voting decreased significantly with each \$10,000 that representatives received from "countermovement industries" (i.e., businesses at odds with proenvironmental legislation) (Ard, Garcia, & Kelly, 2017). In the specific case of the ESA, Plater (2004) argued that opposition to the Act may stem from an allegiance between groups who benefit from pork-barrel projects and individual congressmen who "gain power, votes, and campaign contributions by bringing infusions of federal taxpayer dollars into their local districts" (Plater, 2004, p. 302). Collectively, these studies suggest that environmental policy outcomes are unlikely to be driven by the opinion or interests of the general public; rather, these studies suggest that environmental policy is driven by narrow business interests and wealthy elites who benefit from less protective environmental policy.

Some scientists have suggested that continued protections for controversial species such as gray wolves or grizzly bears might erode support for the ESA or the species it protects. If so, one would expect to find less support for the ESA in places where such species were listed over long periods and where media attention has portrayed the species and/or ESA as controversial (e.g., Houston, Bruskotter, & Fan, 2010). However our data show that neither support for the ESA, trust in the FWS, nor attitudes toward wolves varied across regions where both the presence and listing status of wolves have varied. Although these data undercut the idea that controversial species are somehow responsible for reducing support for the ESA, it is important to recognize that the areas actually inhabited by wolves (i.e., part of wolf range) are among the least populated in the United States (Bruskotter, Vucetich, Enzler, Treves, & Nelson, 2014), a nation where more than four in five people reside in urban areas. Thus, it is possible that opposition to wolves occurs at a finer spatial scale (Treves, Naughton-Treves, & Shelley, 2013) than could be detected by the sampling scheme of our study, given that most residents within these regions reside in in urban areas where attitudes are typically more positive (Williams, Ericsson, & Heberlein, 2002). However, this concern is somewhat muted by recognizing that a large majority of people who selfidentified with the interests of farming and ranching expressed support for the ESA. Moreover, some rural communities (e.g., native tribes) hold more positive views toward wolves (Shelley, Treves, & Naughton, 2011). In any case, the fair and just handling of opposition by small groups of people requires some care because all citizens—urban and rural—have a legitimate interest in the conservation of species (Vucetich, Bruskotter, Nelson, Peterson, & Bump, 2017).

In conclusion, our results suggest the ESA is commonly portrayed in a manner that is inconsistent with how the Act is viewed among the American public. Indeed our results show that support for the ESA generally was high—even among those who self-identify with the special interests who sometimes vehemently oppose ESA protections. Further, contrary to the predictions of some conservationists, protecting controversial species such as the gray wolf does not appear to undermine support for the ESA in regions where that species is protected. Our results have widespread application for conservation policy. Specifically, they suggest: (i) conservation professionals should not assume that protecting species even where politically controversial—will undermine support for biodiversity conservation policies, nor support for those who administer such policies and (ii) concerted efforts by legislators to undermine or minimize policies should not be taken prima facie as an indication of public opposition—or even the opposition of those they purport to represent. Beyond conservation, our results may be of value to policy scholars who are interested in understanding why in some instances governments are more responsive to the special interests of a few, as opposed to the uncontroversial will of most citizens. The question, whose treatment is beyond the scope of this article, is what institutional or grass roots changes would work to reduce that lack of such responsiveness in general or in the special case of conservation policy.

#### ACKNOWLEDGMENTS

Authors JTB and RSW paid for this study via start-up funds provided by the School of Environment & Natural Resources at Ohio State University. The authors declare no conflicts of interest.

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#### SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

How to cite this article: Bruskotter JT, Vucetich JA, Slagle KM, Berardo R, Singh AS, Wilson RS. Support for the U.S. Endangered Species Act over Time and Space: Controversial Species do not Weaken Public Support for Protective Legislation. *Conservation letters*. 2018;e12595. https://doi.org/10.1111/conl.12595