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FEDERAL FUNDING STATUTES AND STATE-FEDERAL WILDLIFE AUTHORITY: DID CONGRESS DEMONSTRATE A PREFERENCE FOR STATE WILDLIFE MANAGEMENT AUTHORITY WITH PITTMAN-ROBERTSON AND DINGELL-JOHNSON?

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Thesis

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Wildlife Biology

Federal Funding Statutes and State-Federal Wildlife Authority: Did Congress Demonstrate a Preference for State Wildlife Management Authority with Pittman-Robertson and Dingell-Johnson?

Committee Chairperson: Joshua J. Millspaugh

Abstract:

The Federal Aid in Wildlife Restoration Act of 1937 now known as Pittman-Robertson and Federal Aid in Sport Fish Restoration Act of 1950 now known as Dingell-Johnson are federal statutes which stand as the original and perhaps most significant federal funding statutes supporting state wildlife conservation and management. Congress's decision to pass these statutes may be argued to be a *prima facie* endorsement of state wildlife agencies (SWA) as the primary managers of wildlife since each statute dedicated substantial federal excise revenue to SWAs. We hypothesized we would find consistent evidence in favor of primary state management authority over wildlife. Through objective analysis of PR & DJ's Congressional Record, we discovered limited consideration of relative state and federal authority. We then sought evidence beyond the record of these statutes looking both to the status of wildlife conservation and conservation law when these statutes were passed. This research yielded meaningful insight suggesting Congress's primary motivation for PR & DJ was to respond to a national wildlife crisis. Finally, we sought to inform the legacy of PR & DJ, looking to the future of state-federal wildlife collaboration and funding by examining the Recovering America's Wildlife Act of 2022 (RAWA). We draw parallels between the wildlife crisis of the 1930's and the modern global wildlife crisis, suggesting that RAWA or a similar statue will potentially surpass the importance of PR and DJ for North American wildlife conservation.

Federal Funding Statutes and State-Federal Wildlife Authority: Did Congress Demonstrate a Preference for State Wildlife Management Authority with Pittman-Robertson and Dingell-Johnson?

Chapter 1: Analysis of Congressional Record of Pittman-Robertson and Dingell-Johnson

Abstract:

The Federal Aid in Wildlife Restoration Act of 1937 now known as Pittman-Robertson and Federal Aid in Sport Fish Restoration Act of 1950 now known as Dingell-Johnson are federal statutes which stand as the original and perhaps most significant federal funding statutes supporting state wildlife conservation and management. Congress's decision to pass these statutes may be argued to be a prima facie endorsement of state wildlife agencies (SWA) as the primary managers of wildlife since each statute dedicated substantial federal excise revenue to SWAs rather than for other purposes such as funding federal wildlife agencies. If indeed Congress was motivated by a preference for state authority in passing these statutes, we expected to find evidence within the documents comprising the Congressional Record of each. We hypothesized we would find consistent evidence in favor of primary state management authority over wildlife. Through objective and manual analysis of PR & DJ's Congressional Record, we discovered limited consideration of relative state and federal authority. Although primary state authority was acknowledged within the Congressional Record, our analysis suggests that Congress gave little thought to relative state-federal authority over wildlife. Instead, Congress appeared to be more motivated to form a joint federal-state response to a perceived wildlife crisis.

Introduction

In September 1937, Congress unanimously passed the Federal Aid in Wildlife Restoration Act (16 USC 669-669i; 50 Stat. 917) directing that \$3 million (1937 dollars) in federal excise tax revenue from the sale of arms and ammunition be apportioned among U.S. states in support of state wildlife conservation and management (Rutherford, 1949). The law, subsequently known for its primary sponsors, Senator Key Pittman (D-NV) and Representative A. Willis Robertson (R-VA), as Pittman-Robertson (PR), is a cornerstone upon which state wildlife conservation has been built (Organ and McCabe, 2018; Regan and Williams, 2018). That original allocation of funds when combined with over 80 years of excise tax disbursements has resulted in over \$19 billion (2018 dollars) in direct conservation revenue to state and territorial wildlife agencies (SWAs) (Crafton, 2019).

Decades before the passage of the Endangered Species Act of 1973, populations of many now-common species such as white-tailed deer (*Odocoileus virginianus*), elk (*Cervus canadensis*) and wild turkeys (*Maleagris gallopavo*) had declined dramatically, and the outlook for their persistence was bleak. Much of the credit for the recovery of these species is given to PR's reliable funding of state wildlife agencies, allowing these agencies to expand staffing and conservation expertise and helping insulate their budgets from unpredictable state legislative funding (Adams and Hamilton, 2011; Branch et al., 2022; Trefethen, 1975). Notably, and related to these accomplishments, PR also contains a provision inserted by U.S. House sponsor Robertson, a former state wildlife commissioner, requiring that participating states pass legislation directing all hunting license proceeds to their wildlife agencies. This thoughtful addition, known as

"Robertson's 29 words," has provided a significant additional source of funds to SWAs and helped insulate the agencies from the perils of state legislative appropriations (Williamson, 1987). Moreover, in terms of revenue to SWAs, this provision has proven even more important to SWA budgets than the excise tax proceeds from PR (Booher et al., 2022, Organ, 2018, Regan and Williams, 2018).

Similarly in 1950, Congress passed the Federal Aid in Sport Fish Restoration Act (16 USC §§ 777-777k; 64 Stat. 430) largely predicated upon the success of PR and with broad support from sportsmen. Also known for its primary legislative sponsors, Representative John Dingell Sr. (D-MI) and Senator Edwin C. Johnson (D-CO), the statute is referred to as Dingell-Johnson (DJ). Like PR, DJ allocated to SWAs the proceeds of a federal excise tax - this time a 10% tax on sport fishing tackle. As with PR, DJ also requires that states direct fishing license revenue to wildlife agencies rather than to state general funds. The original sum allocated to states by DJ was \$5 million (1950) dollars), and as with PR millions of dollars have subsequently flowed to SWAs as a result of this statue (US Fish and Wildlife Service, 2012). Unlike PR, DJ's ultimate passage was somewhat controversial because the "earmarking" of excise funds for the benefit of a specific group was challenged as inappropriate and contrary to Congress's custom. Indeed, the original bill was vetoed by President Harry S. Truman in 1949 prior to successful passage in 1950 (Cooney, 2012; Organ, 2018; US Fish and Wildlife Service, 2012). The significance of PR and DJ for U.S. wildlife conservation cannot be overstated, and much of their importance is related to the vital role that SWAs play in this endeavor.

Since the early days of U.S. wildlife conservation, states and their wildlife agencies have traditionally been viewed as the primary managers of wildlife. This

position is grounded to a large extent in the modern Public Trust Doctrine (PTD) whose basic idea is that certain resources, common to everyone, are "owned" by states but held and managed in trust for the common good. The doctrine's earliest roots reach back to ancient Roman law, later adopted and modified in England before being exported to early American colonies and embedded in U.S. common law (Batchelor et al., 2018; Blumm and Paulsen, 2013; Sax, 1970). The U.S. Supreme Court first recognized and endorsed the doctrine in 1842 (*Martin v. Waddell*) and reaffirmed it in 1892 (*Illinois Central RR v. Illinois*). Notably, these early decisions involved state ownership of navigable waterways, rather than directly focusing on wildlife (Sax, 1970). In its broadest interpretation, the PTD holds that states, via trust ownership, have the final say over wildlife conservation decisions regardless of where the animals may roam within a given state. From this perspective, wild animals whether found on state, private, or federal land remain subject to management by SWAs, not private landowners or federal authorities.

However, the idea that SWAs possess plenary authority over wildlife in every instance has been questioned, with some suggesting that federal agencies at times have inappropriately ceded their own authority and statutory wildlife duties to states (Nie et al., 2017). Additionally, subsequent judicial decisions have suggested that the PTD's reach is not limitless. Various courts including the U.S. Supreme Court have interpreted the Treaty, Property, Commerce, and Supremacy Clauses of the U.S. Constitution to challenge state authority in certain instances. Notably, authority over migratory birds under the Migratory Bird Treaty Act of 1918 (17 U.S.C. 703-712) was effectively ceded by states to the federal government after the 1920 U.S. Supreme Court in *Missouri v. Holland* (252 U.S. 416), and much later in 1979 the doctrine was further limited by the

U.S. Supreme Court in *Hughes v. Oklahoma* (441 U.S. 322). However, not all modern authorities agree upon the present dividing line between state and federal authority over wildlife (Kisonak, 2021; Nie et al., 2021).

This historical backdrop informed our research question regarding state authority over wildlife. Given the current differences of opinion on the demarcation between state and federal authority, we wondered if Congress provided evidence of its preference at two historical moments in the relationship between state and federal governments in wildlife conservation - its contemplation and passage of PR and DJ. Thus, we asked whether the legislative histories of PR and DJ would demonstrate a preference by Congress, at the time of the passage of these laws, for primary state authority over wildlife conservation. We predicted that the histories would consistently demonstrate a preference for primary state authority. In passing PR and DJ, Congress chose to dedicate substantial federal revenue to state wildlife conservation, albeit with federal oversight and administration. Congress could have instead allocated these funds solely to federal agencies with responsibility over wildlife or for other uses. The fact that Congress instead chose to invest this revenue in state wildlife conservation, on its face, suggests a preference for state authority over wildlife. Our investigation, however, demonstrates that the answer is more complicated than simply "yes" or "no."

Methods

We viewed PR and DJ's Congressional Records as the most direct sources of Congress's actions and motivations related to these statutes. In order to assess whether relative state-federal authority was, as hypothesized, a motivation for Congress's passage of PR and DJ, we used both objective and subjective (manual) text analysis to review and

characterize these documents. We utilized WestLaw/Thomson Reuters to access the Government Accountability Office's (GAO) record of PR and DJ's histories before Congress (Congressional Record or the Record). We then used NVivo analysis software (https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home) to analyze and characterize the text discovered in the Record. Additionally, we reviewed all available text manually to corroborate NVivo findings and guard against potential search phrasing limitations.

For our objective analysis, we uploaded to NVivo PDF files of each document from the Congressional Records of both PR (Exhibit 1 and Exhibit 2) and DJ, a total of 37 documents, to assess the available text. We performed basic word count analyses and submitted queries designed to identify our terms of interest. We sorted our word counts of the statues' Congressional Records to display the documents' most frequent terms. With our queries, we specifically searched for "power" or "authority" while allowing for similar variants of these root words such as "powers" or "authorized." We then investigated positive query response within individual documents. In addition to these objective measures, we also reviewed all available text manually to ensure that discussions related to state-federal authority were not overlooked due to the use of arcane or subtle language or insufficiently broad queries. In doing so, we achieved confidence in our results because our word analysis, queries and manual reviews all identified the same information as relevant to our investigation.

Exhibit 1 - PR Congressional Record List (screen capture from Westlaw/Thomson Reuters). Highlight identifies original PR statute (Public Law 75-415, 50 Stat. 917).

CONGRESSIONAL MATERIALS

- PL 75-415, 50 Stat. 917 (Sept. 2, 1937) (PDF)
- H.Rep.No. 1572, 75th Cong., 1st Sess. (August 16, 1937) (PDF)
- 💯 S 2670 [Report No. 1572], 75th Cong., 1st Sess. (August 16, 1937) (PDF)
- **S** 2670, 75th Cong., 1st Sess. (August 11, 1937) (PDF)
- S 2670 [Report No. 868], 75th Cong., 1st Sess. (July 6, 1937) (PDF)
- S.Rep.No. 868, 75th Cong., 1st Sess. (July 6, 1937) (PDF)
- MR 7681, 75th Cong., 1st Sess. (June 28, 1937) (PDF)
- 🔀 S 2670, 75th Cong., 1st Sess. (June 15 (calendar day, June 17), 1937) (PDF)

Exhibit 2 - Partial Congressional Record of PR - Cover page of House Report 1572 (screen capture from WestLaw/Thomson Reuters).

75TH Congress HOUSE OF REPRESENTATIVES REPORT 1st Session No. 1572

AID TO STATES IN WILDLIFE RESTORATION PROJECTS

August 16, 1937.—Committed to the Committee of the Whole House on the state of the Union and ordered to be printed

Mr. Lucas, from the Committee on Agriculture, submitted the following

REPORT

[To accompany S. 2670]

The House Committee on Agriculture, to whom was referred the bill (S. 2670) to provide that the United States shall aid the States in wildlife-restoration projects, and for other purposes, after consideration of same, report with the recommendation that the bill do pass with the following amendments:

Page 3, line 13, following the word "cartridges" insert a comma. Page 3, line 13, strike out the word "shall" and insert in lieu thereof

the wording "is hereby authorized to".

Page 3, line 15, following the word "hereby" and preceding the word "appropriated" insert the following wording "authorized to be".

Page 3, line 18, strike out the words "shall be" and insert in lieu

thereof the wording "is authorized to be made"

Page 3, line 23, strike out the words "shall then be" and insert in

lieu thereof the wording "is authorized to be made".

Page 4, line 6, strike out the words "shall be" and insert in lieu

thereof the wording "is authorized to be made".

Page 5, line 24, strike out the words "shall be" and insert in lieu thereof the wording "is authorized to be made".

In his invitation to the conservationists of the Nation to hold a North American Wildlife Conference in Washington in February 1936, President Roosevelt said:

My purpose is to bring together individuals, organizations, and agencies interested in the restoration and conservation of wildlife resources. My hope is that through this conference new cooperation between public and private interests, and between Canada, Mexico, and this country, will be developed; that from it will come constructive proposals for concrete action; that through these proposals existing State and Federal governmental agencies and conservation groups can work cooperatively for the common good.

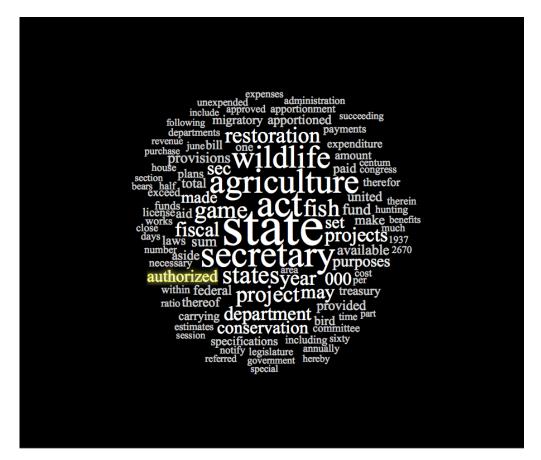
Results

We discovered that PR's record contained eight unique document entries (Exhibit 1), and DJ's record contained 29 unique entries. Our word count analysis of PR and DJ's Congressional records using NVivo software allowed us to assess potential themes within these documents and determine whether discussion of the relative authority of state and federal wildlife agencies was present. Our analysis of PR's Congressional Record displaying the documents' most frequent terms appears in Exhibit 3 along with a word cloud representing frequency in Exhibit 4.

Exhibit 3 - NVivo word frequency (redacted) of PR Congressional Record.

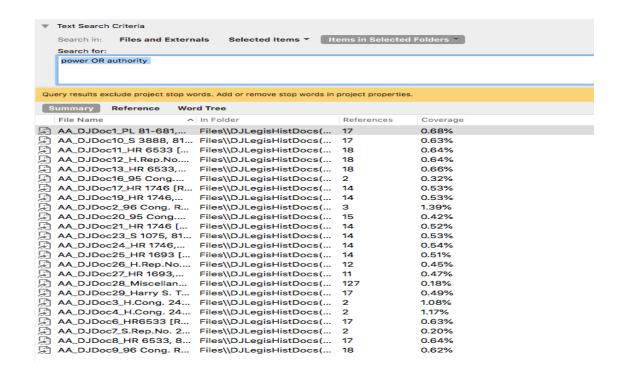
Word	Length	Count	Weighted Percentage	Similar Words
states	6	411	3.89%	state, state', states, states'
act	3	188	1.78%	act
secretary	9	181	1.71%	secretary
project	7	171	1.62%	project, projects
agriculture	11	166	1.57%	agriculture
wildlife	8	151	1.43%	wildlif, wildlife
fish	4	105	0.99%	fish, fished, fishes
game	4	104	0.98%	game
department	10	93	0.88%	department, departments
restoration	11	93	0.88%	restoration, restore
years	5	84	0.79%	year, years
fiscal	6	80	0.76%	fiscal
funds	5	76	0.72%	fund, funds
may	3	73	0.69%	may
sec	3	69	0.65%	sec
purposes	8	67	0.63%	purpose, purposes
conservation	12	65	0.62%	conservation,
authorized	10	65	0.62%	authority, authorize, authorized
000	3	62	0.59%	000
set	3	59	0.56%	set
available	9	56	0.53%	avail, available
made	4	56	0.53%	made
provided	8	55	0.52%	provide, provided, provides
approved	8	52	0.49%	approval, approve, approved, approves

Exhibit 4 - NVivo Word Cloud of word frequency of PR Congressional Record (highlight added for term of interest).



In reviewing these results, our primary interest was in terms such as "authority" or "power" or variants thereof which might relate to Congress's expressing a preference for either state or federal wildlife agency primacy. Our query of the Congressional Record for the terms "power" and "authority" (and variants thereof) and our investigation of positive query responses within individual documents allowed us to locate all relevant passages (Exhibit 5).

Exhibit 5 - NVivo query of PR Congressional Record. Documents containing "power or authority" or variants thereof appear below query.



Our analysis of PR and DJ's Congressional Records provides insight into Congress's motivations for passing these statutes. We identified one passage related to relative state-federal wildlife authority in a document identified as Senate Report No. 868. The portion of the report discussing authority does so in a summary manner acknowledging state "ownership" of and "police power" over animals as well as acknowledging federal authority over migratory species (Exhibit 6). This passage treats relative authority as a settled matter and does not appear to be an impetus or motivation for the statute. Manual analysis of the same document provides further context for this acknowledgement and suggests that Congress gave little thought to the relative authority of state and federal wildlife agencies. Instead, Congress appears to have been motivated to establish a state-federal collaboration at least in part to address a perceived wildlife crisis.

Exhibit 6 - Excerpt from Senate Report No. 868 regarding state and federal wildlife authority.

The people of the several States are the proprietors of the wildlife within their borders, and the State, under its police power, has jurisdiction over it. The Federal Government, through the migratory character of certain species of waterfowl enumerated in the treaty with Great Britain, has jurisdiction over the perpetuation of ducks, geese, and other migrants. Only recently President Roosevelt promulgated a migratory bird treaty with Mexico which greatly enlarges our responsibilities in protection, preservation, and restoration of these species.

The time has come when the Federal Government and the States must cooperatively engage in a broad program which will not only conserve our present day limited supply of wildlife, but restore it to some semblance of its former-day abundance.

(U.S. Senate, 1937, p. 2).

Discussion

Our research question was: Do the documents comprising the Congressional Records of PR & DJ provide evidence that Congress favored primary state authority over wildlife conservation? We do in fact find evidence that Congress, at the time, viewed states as holding primary authority over wildlife. However, we must qualify this response based upon the limited text in the Record on the topic of relative authority, the specific language used in the relevant text, and our discovery of other passages suggesting that Congress's motivation for passage had little to do with whether state or federal wildlife agencies possessed greater authority.

Thus, we answer "yes" because the only incidence in our investigation of the Congressional Record of a discussion of relative authority over wildlife directly acknowledges state ownership and power: "The people of the several states are the proprietors of the wildlife within their borders, and the State, under its police power, has jurisdiction over it" (U.S. Senate, 1937, p. 2). This excerpt invokes, although unnamed,

the Public Trust Doctrine as well as the concept of "police power" by the states, both traditional bases of state authority separate from federal authority enumerated in the U.S. Constitution (Blumm and Paulsen, 2013; Sax, 1970). In this sense, in the summer of 1937 when the report was written, Congress acknowledged state ownership of wildlife and thus the power to manage wildlife populations. The report follows immediately with an acknowledgment of federal "jurisdiction" over migratory waterfowl tacitly invoking the Treaty Clause an enumerated federal power under the U.S. Constitution.

Taken together, these passages suggest that Congress, at least as far as this Senate report can speak for the whole Congress, acknowledged state authority over wildlife with the exception of migratory waterfowl where the federal government controlled. However, this passage reads less as an endorsement or preference for state authority and more as an acknowledgment of the status quo. It appears that in 1937 Congress viewed state ownership of wildlife as a settled matter. During our investigation of the 37 documents comprising the Congressional Record we found no further mention, analysis, or debate over the issue. We are hesitant to call this passage a demonstrable preference by Congress for primary state authority, because authority at the time does not appear to have been in dispute.

Our further analysis instead suggests that Congress gave little thought to the topic of state-federal authority over wildlife. Just after the relevant passage regarding relative authority, the Senate Committee states:

The time has come when the Federal Government and the States must cooperatively engage in a broad program which will not only conserve our present-day limited supply of wildlife, but restore it to some semblance of its former-day abundance.

(U.S. Senate, 1937, p. 2)

Thus, the committee appears motived by a loss of wildlife abundance and the opportunity for broad collaboration between federal and state agencies. Rather than endorsing one side or the other as a controlling power - arguably an adversarial perspective - Congress appears more interested in marshaling the forces of state and federal agencies to respond to a conservation crisis. Additional proof of this motivation by Congress is found earlier within the same report. There, the Committee notes:

The wildlife resources of the continental United States have shown a marked decrease in their populations due to a number of causes. The effects of drought, of floods, of soil erosion, the advance of civilization the destruction of habitat, and the diminishing supply of foods for wildlife species have all played an important part in this depopulation.

(U.S. Senate, 1937, p. 1)

Further bolstering the idea that state-federal cooperation, rather than their relative authority, was a motive force for Congress, we discovered similar passages in House Report No. 1572 (Exhibit 2, above). There, the House Committee discusses the first North American Wildlife Conference held in Washington, D.C., in early 1936 at the urging of President Franklin D. Roosevelt. The Committee quotes from President Roosevelt's invitation to conservationists to the conference. In part, the President states:

My purpose is to bring together individuals, organizations, and agencies interested in the restoration of wildlife resources. My hope is that through this conference new cooperation between public and private interests ... will be developed ... that through these proposals existing State and Federal governmental agencies and conservation groups can work cooperatively for the common good.

(U.S. House, 1937, p. 1)

Thus, approximately a year and a half prior to Congress's considering PR, President Roosevelt was concerned with "restoration of wildlife resources" and with state and federal agencies working "cooperatively for the common good." In the context of our

investigation, it is notable that the House Committee discussed the first North American Wildlife Conference and included the President's perspective in their report. Quoted further in the report, President Roosevelt also offers a sense of urgency over "our wildlife plight":

It has long been my feeling that there has been a lack of a full and complete public realization of our wildlife plight, of the urgency of it and the many social and economic values that wildlife has to our people.

Later in the same report, the House Committee summarizes their apparent impetus for PR:

One of the major objectives of the National Wildlife Association is the passage of legislation to authorize Federal grants-in-aid to the States for conservation purposes. This bill carries out that objective and its provisions have been endorsed by virtually every conservation agency, public and private, in the United States ... We must restore the environment of wildlife, and its preservation for all time is essentially a problem of land and water management. The time has come when the Federal Government and the States must cooperatively engage in a broad program which will not only preserve our present-day limited supply of wildlife, but restore it to some semblance of its former abundance ... To that end S. 2670 was introduced in the Senate. A companion measure, H.R. 7681, was introduced in the House of Representatives ...

(U.S. House, 1937, p. 2)

The first and second North American Wildlife Conferences played a significant role in galvanizing support for the proposal and ultimate passage of PR by Congress (Organ, 2018; Trefethen, 1975). The fact that House Report No. 1572 points to the first conference and quotes President Roosevelt in the context of that conference is therefore not surprising. Additionally, the similarities between the President's message and the additional content from the House and Senate reports further persuades us that the persistent themes of - significant concern over declining wildlife populations, a pressing

need to restore these populations, and the solution of collaboration between the federal and state governments - were indeed the primary motivating factors for Congress's passage of PR. Viewed in this context, the brief mention of state authority-ownership of wildlife appears to be of minimal importance.

Nevertheless, primary state authority was definitively acknowledged by Congress consistent with the Public Trust Doctrine and police power, while federal authority was acknowledged in the context of migratory waterfowl. While our objective inquiry into the Congressional Records of PR and DJ has provided helpful understanding of the Congresses of 1937 and 1950 and their apparent perspectives on relative state-federal wildlife authority, our research suggests the opportunity for further inquiry regarding the broader context of the passage of these important statutes.

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Chapter 2: Beyond the Congressional Record of Pittman-Robertson and Dingell-Johnson

Abstract:

We predicted that Congress would demonstrate a preference for primary state authority over wildlife populations during passage of Pittman-Robertson (PR) and Dingell-Johnson (DJ). However, we demonstrated in Chapter 1 that Congress offered scant discussion of relative state and federal authority over wildlife during their passage of these statutes. The little discussion that occurred appeared to assume state ownership and authority over wildlife, with no dissension or debate. In our further research, we investigate the broader circumstances surrounding the passage of these iconic statutes. In doing so, we encounter factors within the historical and legal context of the times that offer insight into why relative authority over wildlife was of little concern to Congress. Here, we explore these factors in greater detail. We examine evidence from the conservation landscape leading up to PR's passage. We then investigate the legal context of the passage of these statutes - the state of the law - regarding relative authority over wildlife populations. In doing so, we suggest, as in Chapter 1, that Congress' primary motivation for allocating significant federal funding to state wildlife agencies was a sense of alarm over vanishing wildlife populations. By passing PR and later DJ, Congress established federal-state collaborations to better respond to wildlife declines. Additionally, we suggest that the status of U.S. Supreme Court decisions regarding the Public Trust Doctrine made relative authority over wildlife non-contentious at the time.

Introduction:

Our objective investigation in Chapter 1 of whether Congress expressed a preference for primary state or federal wildlife management authority during its consideration of PR and DJ yielded surprisingly little information from the Congressional Record (the Record), with only one mention of the topic. This mention, located in a U.S. Senate report within PR's Record, dealt with the topic briefly, treating relative authority as a settled matter in favor of states:

"The people of the several states are the proprietors of the wildlife within their borders, and the State, under its police power, has jurisdiction over it"

(U.S. Senate, 1937, p.2).

Thus, to the extent this statement can be said to represent the position of Congress in 1937, it is a definitive endorsement of state authority over wildlife. However, the same document suggests that Congress's focus was elsewhere:

The wildlife resources of the continental United States have shown a marked decrease in their populations due to a number of causes. The effects of drought, of floods, of soil erosion, the advance of civilization, the destruction of habitat, and the diminishing supply of food for wildlife species have all played an important part in this depopulation. The increased number of men and women who enjoy the chase has been another factor.

The time has passed when conservation is the only remedy to apply to our dwindling wildlife species. Conservationists and technical research workers in wildlife problems have recommended for a number of years that restoration projects must be carried on if we are to bring back for the enjoyment of our people the wildlife species which once were so abundant in our forest, fields, and waters.

The problems of wildlife are inescapably and inherently linked with the land. We must restore the environment for wildlife if we are to have more of it. We must give it a better place in which to live and multiply.

The time has come when the Federal Government and the States must cooperatively engage in a broad program which will not only conserve our present-day limited supply of wildlife, but restore it to some semblance of its former-day abundance

(U.S. Senate, 1937, p.1-2).

It was this additional passage within Senate Report No. 868 that inspired our further research. Prior to our investigation, we expected that the Record would contain extensive discussion of relative state-federal wildlife authority, and we predicted that Congress would exhibit a consistent preference for primary state authority. While the first Senate Report excerpt on state ownership/police power indeed suggests that at the time Congress considered states to have primary authority, we were interested to know why the issue was not more prominent within the Record. During our investigation within the Record, we discovered evidence regarding why Congress engaged in such limited discussion of relative wildlife management authority. Chief among this evidence, as shown above, was obvious concern by Congress that the U.S. faced a wildlife crisis and a view that collaboration between state and federal wildlife agencies, embodied by PR, was to be their response to this crisis. This discovery prompted our broader investigation outside of the Record of the status of wildlife conservation as well as the status of the law related to state-federal authority over wildlife at the time.

To accomplish this task, we worked outward from the Record, initially focusing upon PR's primary sponsors Senator Key Pittman (D-NV) and Representative A. Willis Robertson (R-VA) in document searches, and later discovering that Jay N. "Ding" Darling and Professor Aldo Leopold played important, if largely unknown, roles in the years immediately prior to PR's passage. Using these individuals as the focus of our searches we moved further outward from the Record. Our research yielded documents discussing the time shortly before PR's proposal and passage. Significant among these discoveries were the published proceedings of the first and second North American Wildlife Conferences, occurring in 1936 and 1937 (Proceedings 1936; Transactions,

1937). Additionally, we discovered a record from 1934 of the President's Committee on Wild Life Restoration and a 1949 publication of the Wildlife Management Institute chronicling accomplishments during the first ten years after PR's passage (Beck et al., 1934; Rutherford, 1949). We also found publications by the Boone & Crockett Club in 1975, describing significant conservation insights from the 1930's (Trefethen, 1975), and by the U.S Fish & Wildlife Service in 1987, commemorating 50 years of PR (Kallman, 1987). Each of these documents provided helpful detail on the status of wildlife conservation and notable historic events in the 1930's. Taken together, these documents proved to be extremely important in filling in a broader contextual understanding of the likely mindset of the Congresses of 1937 and 1950.

Additionally, from previous research we were familiar with the importance of the Public Trust Doctrine (PTD) in discussions of relative state-federal authority over wildlife. Thus, we sought a greater understanding of the legal landscape that would have informed the Congresses of 1937 and 1950. Our analysis of significant legal decisions, primarily by the U.S. Supreme Court prior and subsequent to the passage of these statutes, provided meaningful insight into likely legal frames of reference for Congress at these times in U.S. conservation history. Taken together, our broader investigations of the conservation and legal landscapes have provided important context for our objective research of the Record.

The purpose of this additional research was to allow us to more fully understand why these Congresses spent little time and effort over relative state-federal wildlife authority. From this investigation, we feel the story of PR and DJ is more complete, and we can convey with greater certainty why the Record is so sparse regarding state-federal

authority over wildlife. These Congresses were far more concerned with innovating collaborative state-federal efforts to conserve vanishing wildlife populations, and they existed in a legal landscape that embraced the idea of state ownership and authority over wildlife populations.

Status of Wildlife Conservation in the 1930's: North American Wildlife Conferences

At the first North American Wildlife Conference held in Washington, D.C. in 1936, conference Chairman F.A. Silcox, the fifth Chief of the U.S. Forest Service, opened the proceedings with sobering words: "We are assembled here in a common effort to help restore and conserve the vanishing wildlife resources of a continent." (Silcox, 1936, p. 1). Silcox went on to describe some of the continent's lost abundance:

We know ... that never again will the broad valleys of the upper Missouri support, as the Lewis and Clark journal reveal that they did in 1805, an aggregation of wildlife, including buffalo, elk, antelope, deer, moose, big-horn sheep, grizzly bear, prairie chicken, geese, and ducks, that for number and variety exceeded anything the eye ... [European-white] man had ever looked upon (Silcox, 1936, p. 2).

Mountain goats, moose, many species of migratory waterfowl and grizzly bear are scarce. Elk were so decimated that in 1904 domestication was urged as the only practical method of preservation. Food fish in the Great Lakes and in long stretches of both coastal waters are approaching exhaustion. Game and food fish in most major rivers and streams are gone or reduced to a shadow of their former numbers. Certain species of songbirds are so scarce as almost to be classed as museum specimens. Upland birds and fur bearers, existing as scattered remnants of former abundance, are still declining ... The whir of the heath hen and passenger pigeon is gone from the land (Silcox, 1936, p. 3).

Pastures have replaced prairies, dust-storms becloud and befoul vast areas which were once wildlife breeding grounds. On national parks and national forests wildlife is increasing, but much of our privately owned range land and public domain is depleted ... Political expediency is too often the rule in wildlife affairs. Over the length and breadth of the land fishermen and hunters, bird lovers and recreationists, city dwellers and urban folk, fathers and sons, scientists, sportsmen, and laymen are disheartened and discouraged at conditions which you who represent them here know well (Silcox, 1936, p. 5).

This opening theme of loss and this sense of a wildlife crisis would be taken up by others during the conference and would appear again at the following year's North American Conference in St. Louis, Missouri (Transactions, 1937). Although post-European-contact depletion of wildlife has been extensively documented, particularly for animals such as bison (*Bison bison*), grizzly bears (*Ursus arctos horribilis*) and wolves (*Canis lupus*), the pervasive sense of alarm over vanishing wildlife in the 1930's is less well known or documented (Organ et al., 2012; Turner, 1935).

The North American Conference itself resulted from a call to action by President Franklin D. Roosevelt whose written message to attendees was read by Secretary of Agriculture Henry A. Wallace. The President's message conveyed in part: "It has long been my feeling that there has been a lack of full understanding of our wildlife plight, of the urgency of it, and of the many social and economic values that wildlife has to our people" (Wallace, 1936, p. 5). The opening round of speakers also included Juan Zinser on behalf of Mexico's President, and J.B. Harkin, the Commissioner of National Parks Canada, appearing on behalf of Canada's Prime Minister (Harkin, 1936, p. 6; Zinser, 1936, p. 6).

Notably, the final speaker for the opening session was Jay N. "Ding" Darling who had recently resigned his position as Chief of the U.S. Biological Survey (USBS) (precusor to U.S. Fish and Wildlife Service), a position to which he was appointed by President Roosevelt in 1934. Darling, was a Pulitzer Prize-winning political cartoonist, the primary advocate and original artist for the Federal Duck Stamp Program, and the founder of what would become the Cooperative Fish and Wildlife Research Units Program. He had also urged Roosevelt to convene the North American conference

(Trefethen, 1975). Darling titled his speech to the conference "The Crisis," though his remarks began with optimism: "When I look across this surprisingly large audience and the great breadth of interests what have come to this conference, instead of being a crisis it looks like a resurrection to me. [Applause.] It is gratifying to see the tremendous response which has followed the call of the President of the United States" (Darling, 1936, p. 16).

Darling quickly made clear, however, the gravity of the conference:

Wealth will continue to exist on this continent only so long as the natural resources of our soil and water continue to yield up their riches. When these are gone, prosperity, standards of living and happiness among our people will vanish with them ... Our carelessness and apathy toward this basic fact have been notorious on this continent, and among our rich endowment of natural resources no element has been so completely ignored and so heedlessly allowed to vanish as our wealth in the wildlife field

(Darling, 1936, p. 17).

He then challenged attendees to consider the state of wildlife conservation:

We may clarify the proposition which lies before this conference by determining first what is meant by wildlife conservation, and its significance. We must, I believe, with common accord agree that whatever we may have been doing is not wildlife conservation, since we continue to have less instead of more. A great gap has existed somewhere in our continental mechanism for wildlife conservation through which has leaked a constant and increasing loss which has drained many of our species to the vanishing point and left an inadequate population of all the rest. If wildlife is an economic and social benefit, our first objective must be restoration. We have awakened too late for so called conservation ...

(Darling, 1936, p. 17).

The word "restoration" occurs here and frequently throughout the conference.

Consistent with previous speakers, Darling's address suggests that he viewed prior efforts to conserve wildlife as insufficient. He presents restoration of wildlife as a more active necessity: "We have awakened too late for so called conservation …" (Darling, 1936, p.

17). It is worth noting that this focus on restoration continued unabated through PR's passage. The statute's formal name is in fact the "Federal Aid in Wildlife Restoration Act." Two days later, Darling again spoke before the conference describing the need to forge a viable political constituency out of attendees and others interested in the wildlife plight and to establish a national conservation organization to help do their bidding:

This body ... should devote itself to an organization which will first, unite on a comprehensive program of common aims and second, use the agencies which our government provides to see that program is carried forward. Specify your objectives and use the pressure of your great numbers where it will do most good — on your elected officials.

Money and legislative backing are the two great necessities for a more competent wildlife program. Both are subject to legislative control. Legislators are responsive to individual pressure from those who vote. You belong in that pressure group. (Darling, 1936, p. 85)

Later the same day, attendees approved the formation of the General Wildlife Federation which would become the National Wildlife Federation, and Darling was selected as the organization's first President

(Darling, 1936, p. 93).

The 1936 North American Conference predated PR's passage by 19 months, and its proceedings as discussed support our findings from PR's Congressional Record.

Conference speakers demonstrated significant concerns over declining wildlife populations just as members of Congress did during their deliberations over PR.

Additionally, although we found no discussions of specific legislative actions in the conference's formal record, Darling's final address openly encouraged attendees to prepare for political action. Notably, the conference was also attended by individuals who would play direct roles in PR's crafting and passage including Carl Shoemaker who

would soon draft the bill that would become PR, and Senator Key Pittman, co-sponsor of the legislation that would bear his name (Proceedings, 1936, p. ii). As such, this conference offers meaningful context for PR's passage and further insight regarding why relative state-federal authority over wildlife was of little concern to Congress in 1937.

Not surprisingly in early March of 1937, at the Second North American Wildlife Conference, Ding Darling in his address to the newly established General Wildlife Federation, offered a more focused preview of the legislation that was to come:

Three and a half million dollars of excise tax which comes out of the outdoor pocket, this what we commonly call nuisance taxes, are collected by the federal government from the men who go out and enjoy environmental conditions in the open — three and a half million dollars that goes into the general treasury and never comes out for wildlife or conservation. That belongs to conservation. A bill should be introduced in Congress earmarking that money for conservation purposes.

If we could get the federal government to set up a cooperative fund with states, matching pennies for projects which are constructive and justified from scientific and productive background, we would make a tremendous step forward.

(Darling, 1937, p. 245).

On September 2, 1937, six months after Darling's speech, President Franklin D.

Roosevelt signed into law the Federal Aid in Wildlife Restoration Act which would become known as Pittman-Robertson. PR was in fact a "cooperative fund with states."

The "nuisance tax" Darling referred to was a repurposed federal excise tax on firearms and ammunition used to fund the program. Darling's "matching pennies for projects" was also included in PR, although states are in fact reimbursed for up to 75% of approved project costs (Williamson 1987, Trefethan 1975).

President's Committee & Leopold's American Game Policy

In addition to the proceedings of these first two North American Wildlife

Conferences, we discovered other resources lending similar insight into the state of

wildlife conservation in the 1930's. In February 1934, two years before the first conference, President Franklin D. Roosevelt received a report entitled "A National Plan for Wild Life Restoration." Roosevelt had commissioned the report from his President's Committee on Wild Life Restoration, comprised of Thomas H. Beck, Ding Darling, and Professor Aldo Leopold. The Committee's overarching recommendation to the President was to purchase 5 million acres of "sub-marginal and commercially unprofitable lands" to be reconditioned and employed largely to "fulfill our obligation under the Migratory Bird Treaty and to accept the responsibility umpired by the Lacey Act." (Beck et al., 1934, p. 3-4). Thus, the primary focus of the President's Committee was avian recovery through habitat expansion. However, the report offers broader insight into concerns over "incontrovertible evidence of a critical and continuing decline in our wild life resources" as well as "authority over wild life [that] is scattered through several [federal] departments and bureaus ... to the great disadvantage of orderly progress in conservation and restoration" (Beck et al., 1934, p. 4). Thus, the committee was broadly concerned over declining wildlife and less than ideal federal capacity to address wildlife depletion.

Similarly, a few years earlier in 1930, Aldo Leopold chaired the Committee on Game Policy whose Report to the National Game Conference on An American Game Policy began: "Demand for hunting is outstripping supply. If hunting as a recreation is to continue, game production must be increased." (Leopold et al., 1930, p. 3). The report continues with an elegant synopsis of the need for "bold" action:

We urge frank recognition of the fact that there is no panacea; that game conservation faces a crisis in many states; that it is only a question of time before it does so in all states; that the present order is radically unsatisfactory; and that mild modifications of it will not do. We are convinced that only bold action, guided by as much wisdom as we can muster ... can restore America's game resources. Timidity, optimism, or unbending

insistence on old grooves of thought and action will surely either destroy the remaining resources, or force the adoption of policies which will limit their use to a few (Leopold et al., 1930, p. 4).

Notably, joining Professor Leopold on the Committee on Game Policy was Congressman A. Willis Robertson, who in 1937 would sponsor in the U.S. House of Representatives a version of the bill that would bear his name and become Pittman-Robertson (Leopold et al., 1930, p. 4).

Dust Bowl & Great Depression

Other scholars have noted that a number of factors such as the Dust Bowl and the Great Depression converged to cause alarming wildlife declines in the 1930's. In a 1987 U.S. Fish and Wildlife Service publication celebrating PR's success over 50 years, Lonnie L. Williamson, then Secretary of the Wildlife Management Institute, reflected on "The Dirty Thirties:"

The dust storms and unemployment whipped wildlife habitat destruction and poaching to a peak. People were hungry, ammunition was inexpensive, and game provided high-quality protein. Waterfowl hit all-time lows. Other wildlife populations began to falter also. Gains that had been made in wildlife restoration since the century's turn began to erode (Williamson ,1987, p. 2).

Williamson went on to note that PR was not the only federal response from the era driven by concerned leaders: "In quick order, these conservation leaders ... spawned enactment of the Duck Stamp and Fish and Wildlife Coordination Acts in 1934 [and] established the Cooperative Wildlife Research Unit Program in 1935 ..." (Williamson, 1987, p. 4).

James B. Trefethen, writing for the Boone & Crockett Club in 1975 offers additional insight noting how World War I and the post-war period contributed to the collapse that would occur in the early 1930's:

The seeds of tragedy were sown in the early years of World War I. When wheat prices soared under the demands of European nations ... America, almost literally, became the

breadbasket of the world. Spurred by high prices, farmers in the wheat belt ploughed every available acre and drained any wetlands for which they could create an outlet.

At the close of the war, the demand for beef, wool, and grains, especially for wheat remained high ... Since the early days of agriculture, the ability to plow a straight furrow had been a mark of efficiency, and in the rolling-prairie country of the Middle West there furrows ran uphill and down. No one seemed concerned about the bare, yellow blotches of raw subsoil that were appearing on the hillsides ... No effort was made to restore the fertility of the soil.

The Dust Bowl was a disaster for the wildlife of the region as well as for human beings, and the greatest impact of all was on the waterfowl. The area of the drought coincided with most productive duck-breeding territory on the continent ... (Trefethen, 1975, p. 217-218)

As an addendum to this research, it is worthwhile to remember where the evolution of wildlife conservation and research stood, particularly in the 1930's prior to PR's passage. Although this line of research is somewhat tangential to our primary focus, it serves as a reminder that the world of the 1930's and 1950's was different. What we now accept as wildlife conservation as a scientific career and professional endeavor, was in its earliest stages of formation.

Wildlife Conservation as a Profession

Added to this convergence of national poverty, unchecked agricultural expansion, habitat depletion and drought is the simple fact that wildlife conservation had yet to become a science or even an identifiable profession. Leopold's foundational text "Game Management" would be first published in 1933 (Leopold, 1933), and as noted, the first Wildlife Cooperative Research Units would not arrive until 1935 (Yeager, 1965). The downstream effect of these monumental accomplishments would not be felt for years to come. Modern methods of estimating wildlife populations and growth trends and managing take did not exist. Additionally, research-based knowledge of species life

cycles, biological requirements and interactions were lacking. "Between 1908 and 1920 state wildlife agencies grew and developed rapidly ... But there was little scientific knowledge of the needs of the various species" (Organ and McCabe, 2018, p. 10). These agencies also relied completely upon strapped state assemblies for annual funding for their work. In short, prior to PR's stable funding streams "[s]tate wildlife agencies were struggling to make headway in the absence of science, trained personnel, and funding" (Organ and McCabe, 2018, p. 13, Regan and Williams, 2018).

Status of Wildlife Conservation Law in the 1930's & 1950's

Beyond investigating the status of wildlife conservation, we also sought to understand how the status of wildlife law in the 1930's may have influenced Congress's level of concern over relative state-federal authority. For this investigation, notable decisions by the U.S. Supreme Court bearing on relative authority over wildlife was our primary concern.

As a foundational principle, Article VI, Paragraph 2 of the U.S. Constitution - the Supremacy Clause - establishes that federal laws such as the Constitution and lawful federal statutes are superior to their state equivalents which conflict with them (Nelson and Roosevelt). However, this supremacy is limited to areas of authority granted to the federal government under the Constitution. Notably, one limit on federal supremacy is the Tenth Amendment to the U.S. Constitution which established the idea of federalism or "states' rights." The basic idea is that powers not expressly granted to the federal government by the Constitution - known as "enumerated powers" - are reserved to the states (Burnham, 2006).

Within this legal backdrop, key to our investigation is the establishment within the U.S. of the Public Trust Doctrine (PTD). The U.S. PTD is a doctrine founded in common or case law rather than legislative actions, which succinctly says that states "own" wildlife but that they do so in the role of trustee, obligated to manage the wildlife trust for the benefit of all (Batchelor et al., 2018). Later, the PTD would become more formalized within state statutes and constitutions. This roots of this doctrine date to ancient Rome and the idea of common ownership of transient natural resources such as air, water, and wild animals (Blumm and Paulsen, 2013). A variation of this idea was later adopted in England with the modification of vesting ownership — the trustee role of such resources in the Crown resulting in legal constructs such as the "King's Forests." Although theoretically these resources were held in public trust by the Crown, access was generally limited to a select few. When the PTD appeared in the U.S., a country established as a representative democracy in direct opposition to monarchy, the doctrine again evolved with owner-trustee role vested in state governments (Batchelor et al., 2018; Blumm and Paulsen, 2013; Sax, 1970). The manner of the PTD's establishment in the U.S. as well as the timing of cases questioning the doctrine's scope are helpful in understanding Congress's likely perspective towards relative state and federal authority over wildlife in the 1930's. In certain circumstances, bedrock principles of federal supremacy and absolute state ownership and authority over wildlife collide.

PTD Foundation - Mundy and Waddell Cases

Although an exhaustive legal examination of the U.S. PTD is impractical and beyond the scope of this investigation, understanding the doctrine's evolution largely through reviewing U.S. Supreme Court cases is illuminating. Early PTD cases

prominently focused on disputes over navigable waterways and the lands below them. The first, *Arnold v. Mundy*, is an exception to our norm of primarily following U.S. Supreme Court cases, as it was decided by the New Jersey Supreme Court in 1821, just 45 years after the Declaration of Independence. This case was a dispute between Arnold, a landowner on a tidal estuary on New Jersey's Raritan River who had planted oysters for harvest, and Mundy who "trespassed" to harvest the oysters Arnold had planted. The Court found in favor of Mundy on the basis that, after the American Revolution, ownership of common properties such as submerged lands under tidal waters had vested in New Jersey's citizens but that the state could manage and improve such lands "for the common benefit of every individual citizen." (*Arnold v. Mundy*, 6 N.L.J. 1, 78). In short, Arnold the landowner had no greater rights than Mundy or anyone else to the oysters he had planted in what the court determined was a public, state-owned space.

The Mundy case is generally considered a foundational U.S. decision for the PTD in no small part because the U.S. Supreme Court cited it in the landmark case of *Martin v. Waddell* (41 U.S. 367) two decades later in 1842. In the *Waddell* case, another dispute over oysters on submerged lands in New Jersey, the Supreme Court again found in favor of the alleged trespasser on the grounds that the title to such lands had passed to the state of New Jersey as trustee for New Jersey's citizens. Although each of these cases arguably concerned wildlife because they involved the take of oysters from "common" estuaries, they are known more for their role in the establishment of the PTD and their delineation of trust areas such as submerged lands under navigable waters. They did not explicitly invoke state laws concerning wildlife.

PTD and Wildlife - Geer v. Connecticut

Half a century later in 1896, the U.S. Supreme Court decided the keystone case for the proposition that states hold a public trust in wildlife — Geer v. Connecticut (161 U.S. 519). The Geer case occurred in the well-known context of market hunting, the decimation of many species, and an attempt by Connecticut to suppress interstate transportation of game birds taken within the state (Goble et al. Wildlife Law text 3rd Ed). In Geer, the defendant was prosecuted criminally and convicted for possessing with the intent to transport out-of-state a number of upland game birds. The Connecticut Supreme Court upheld Geer's conviction which he appealed to the U.S. Supreme Court. Notably, this case pitted an enumerated Constitutional power of the federal government under the Commerce Clause (Article 1, Sect. 8, Cl. 3), the authority to regulate interstate commerce against a state law to regulate the take and transport of wildlife within its sovereign borders. The U.S. Supreme Court's decision upheld the lower court's findings affirming Geer's conviction. Again citing Martin v. Waddell, among other cases, the Court affirmed the right of Connecticut, as owner-in-trust, to regulate the take and transport of wildlife within its borders.

Although the *Geer* Court did not refer to this trust-based ownership as the "Public Trust Doctrine" - such a name had not yet been coined - the reference to *Waddell* and the Court's language leaves little doubt that it was invoking the ancient doctrine. Of note, the Court also invoked state "police power" in its analysis, noting Connecticut's power "flow[ing] from the duty of the State to preserve for its people a valuable food supply." (161 U.S. 519). In Constitutional Law, state police power is generally viewed under the 10th Amendment as a "reserved power" for states not expressly enumerated for the

federal government. Such powers concern regulating the health, safety, and welfare of a state's citizens (Legarre, 2007; Shapiro, 2020). In our previous investigation within PR's Congressional Record, we encountered both the then unnamed PTD and state police power. Notably, in *Geer* two dissents to the Court's majority opinion, by Justices Field and Harding, pushed back against the idea of state authority in the face of the federal government's power under the Constitution's Commerce Clause foreshadowing potential future limitations of state PTD authority. The *Geer* decision is broadly viewed as a highwater-mark in U.S. Supreme Court jurisprudence for state authority under PTD (Batchelor et al., 2018).

Beyond *Geer* - **Questions** of **Supremacy**

Two decades after *Geer* in 1917, in the *Utah Power & Light Co. v. United States* (243 U.S. 389) the U.S. Supreme Court signaled limitations on the idea of absolute state power on federally owned properties. As we will note, this case is not the first to hint at possible collisions between federal Constitutional powers and state authority, but it is often cited as a landmark decision. In this case, the utility company Utah Power & Light constructed power generation and transmission infrastructure within a national forest without federal permission. The power company argued that Utah law, which would allow the facilities, should apply. The Supreme Court disagreed citing the federal government's power under the Constitution's Property Clause (Article IV, Sect. 3, cl. 2) "to dispose of and make all needful rules and regulations" regarding U.S. owned lands (Coggins et al., Fed. Public Land and Resources Law, 7th ed., p. 141). Quoting its own 1897 decision, *Camfield v. United States* (167 U.S. 518), the Court found that "[a] different rule ... would place the public domain of the United States completely at the

mercy of state legislation" (243 U.S. 389). Essentially, the Court found that the U.S. Constitution's Supremacy and Property Clauses would mean little if state legislatures could dictate permissible practices on federal property.

The Supreme Court reached the same conclusion a decade later in 1928, this time involving wildlife, in its *Hunt v. United States* (278 U.S. 96) decision. This case involved a decision by the federal government to cull a significant number of deer within the Kaibab National Forest and the then Grand Canyon Game Preserve, federal properties in northern Arizona. Years earlier, all natural predators of the deer had been removed from the area, and the unchecked population boom by the deer resulted in over-browsing damage to the land and emaciated herds with insufficient food sources. The state of Arizona took the position that federal agents could not kill the overpopulated deer on these federal properties under the state's game laws. The U.S. Supreme Court again found for the United States holding that "the power of the United States to ... protect its lands and property does not admit of doubt ... the game laws or any other statue of the state to the contrary notwithstanding." (Coggins et al. p. 142, 278 U.S. 96, 100). Again, the Supreme Court finds that an enumerated federal power under the Constitution's Property Clause – "to protect ... lands and property" - coupled with the Supremacy Clause grants federal agencies superior authority over actions taken on federal property.

These decisions, all occurring prior to PR's passage by Congress in 1937, gave some reason to question whether state ownership of and authority over wildlife would persist in every instance in the face of a Constitutional enumerated power of the federal government. However, none specifically addressed *Geer's* holding in favor of Connecticut or overruled any part of the 1896 decision. Thus, the Congress of 1937 when

PR passed and the Congress of 1950 when DJ passed would have been largely operating from a *Geer v. Connecticut* frame of reference.

Geer Overruled in Part: Hughes v. Oklahoma

It was not until eight decades later in 1979 that the U.S. Supreme Court directly revisited its 1896 Geer decision in Hughes v. Oklahoma (441 U.S. 322). In Hughes, the Court considered a scenario similar to the one presented in *Geer* where Connecticut had outlawed the interstate transport of game birds taken within the state. This time, the "wildlife" in question were minnows that defendant Hughes purchased from a commercial hatchery. Hughes was charged with and convicted of violating Oklahoma's law prohibiting their transport out of the state. Here, the Supreme Court acknowledges that *Hughes* case is "the first in modern times to present facts essentially on all fours with Geer." The Court then finds in favor of defendant Hughes and "expressly overrule[s]" Geer on the grounds that the decision failed to properly consider federal authority under the Constitution's Commerce Clause. (Coggins et al. p. 323, 441 U.S. 322). Interestingly, the Court also relied upon its 1920 decision in *Missouri v. Holland* (252 U.S. 416) where the Court found in favor of the federal government when the state of Missouri challenged the Migratory Bird Treaty Act (MBTA) claiming it violated the state's ownership and control of wild animals. In *Holland*, the Court upheld the MBTA as a valid exercise of the government's Constitutional power under the Constitution's Treaty Clause. As noted above, *Holland* was the case that, early on, put the question of authority over migratory birds to rest.

Notably, the *Hughes* Court did not overrule in total the idea of state ownership and management of wildlife, thus leaving the PTD otherwise intact:

At the same time, the general rule we adopt in this case makes ample allowance for preserving, in ways not inconsistent with the Commerce Clause the legitimate state concerns for conservation and protection of wild animals underlying the 19th-century legal fiction of state ownership (Coggins et al. p. 323, 441 U.S. 322).

Many years after the Supreme Court's 1979 decision in *Hughes*, scholars continue to disagree over the full extent of state power under the PTD, particularly when enumerated federal Constitutional powers are at issue (Kisonak, 2021, Nie et al., 2021). It is beyond the scope of our research to analyze modern state laws and constitutions as well as subsequent lower federal and U.S. Supreme Court decisions in order to predict whether state or federal wildlife agencies would or should prevail under varied scenarios.

However, as we asserted in the previous section, the Congresses that passed PR and DJ were legislating at a time when *Geer* stood essentially unchallenged and prior to the case's partial reversal in *Hughes*. Although the Supreme Court had already decided cases such as *Utah Power & Light* (1917), *Holland* (1920) and *Hunt* (1928), all in favor of the federal government, it is not surprising to find the language we did within the Senate Report in PR's Congressional Record:

The people of the several states are the proprietors of the wildlife within their borders, and the State, under its police power, has jurisdiction over it (U.S. Senate, 1937, p.2). Given the status of U.S. Supreme Court doctrine on wildlife authority in 1937 when PR was passed and 1950 when DJ became law, this statement in favor of state ownership of and police power over wildlife seems quite likely to represent the position of Congress at these times.

Based upon our research it is also not difficult to predict that when an enumerated federal Constitutional power over treaties, property, or commerce meets a state claim under the PTD the federal government is more likely to prevail. With *Geer* and *Hughes*,

it simply took many decades for a direct, factual confrontation before the U.S. Supreme Court. It is the nature of the Supremacy Clause that in such cases the federal government will likely prevail. However, in more nuanced circumstances the discussion, debate, and litigation over the scope of enumerated powers and the reach of the state PTD will continue.

Summary of Findings

Our preliminary investigation was into PR and DJ and focused on whether

Congress in the record of its proceedings would demonstrate a clear preference for

primary state authority over wildlife. The result of this inquiry was surprising in that only

one passage in the Record dealt with relative authority over wildlife, and in that passage

Congress acknowledged state ownership of and authority over wildlife. In this further

research, we sought to better understand the context of Congress's decision from both a

conservation and legal perspective.

Exploring the status of wildlife conservation in the 1930's, we located persuasive evidence consistent with the Record that Congress was alarmed by declining wildlife populations and sought "restoration" of these resources through their legislation. We located the proceedings of the first and second North American Wildlife Conferences, both occurring within 18 months of PR's passage, where speakers consistently emphasized concerns over vanishing wildlife and where the idea of collaboration between the federal and state governments was presented. We also found additional sources such as the President's Committee on Wild Life Restoration and Aldo Leopold's report to the American Game Conference which echoed the theme of declining wildlife. Additionally, we discovered examinations by scholars of some of the conditions leading

to these declines. These conditions included the dramatic expansion of midwestern farming and concurrent removal of wildlife habitat during World War I and the post-war era which was followed by the drought and high winds of the Dust Bowl. These scholars also noted the desperation of the Great Depression and the ready availability of ammunition and of game as a source of protein. The takeaway from this portion of our investigation is that the co-occurrence of these conditions led to significant concern by Congress over wildlife, likely making this this wildlife crisis Congress's primary motivation for passing PR.

We also sought to understand how the legal landscape may have influenced Congress's perspective. By reviewing foundational and landmark cases related to state and federal authority over wildlife we were able to appreciate that the Congresses that passed PR and DJ were legislating at a time when *Geer v. Connecticut*, decided in 1896, was the law of the land. *Geer* stood for the idea encompassed by the Public Trust Doctrine that individual states owned the wildlife located within their borders which they held in trust for the benefit of their citizens. Although some cases after *Geer* hinted at limitations on absolute authority by states, it was not until *Hughes v. Oklahoma* in 1979 that *Geer* was partially overruled. The PR and DJ Congresses legislated when *Geer* was unchallenged. Thus, the limited mention of relative state-federal authority within the Record identifying states as the owners of wildlife is not surprising from the perspective of U.S. Supreme Court jurisprudence.

Taken together, our investigations into the conservation and legal landscapes at the time of PR and DJ help explain the limited discussion by Congress of relative authority over wildlife. It appears that Congress was primarily concerned by declining wildlife populations and with establishing a collaboration between the federal and state governments to address this crisis. Additionally, it is likely that the Congresses of 1937 and 1950 were operating from a mindset of largely unchallenged state ownership and control over wildlife populations under *Geer v. Connecticut*. In these circumstances, debate or further discussion over relative wildlife authority was unlikely and unnecessary. Thus, our further investigation beyond the Record has yielded significant insights. Without fully appreciating both the status of wildlife conservation and the law at the time of PR and DJ, we expected more discussion and perhaps disagreement over relative state-federal authority over wildlife. Having now investigated this era from a conservation and legal perspective, we suggest that the PR and DJ Congresses felt little to no conflict over wildlife authority. Their primary purpose was to respond to a national wildlife crisis.

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Chapter 3: PR and the Future of State-Federal Wildlife Funding and Collaboration

(this Chapter was previously published in Conservation Letters as it appears below)

Echoes of 1937: Recovering America's Wildlife Act Would Bring Wildlife Conservation Funding Full Circle

Branch, J.V., J.G. Karlen, J.F. Organ, C.J. Bishop, R.J. Regan, M.S. Mitchell, and J.J. Millspaugh (2022). Echoes of 1937: Recovering America's Wildlife Act would bring conservation funding full circle. *Conservation Letters*. DOI: https://doi.org./10.1111/conl.12890.

Abstract: Wildlife populations currently face significant threats, including habitat loss and climate change. However, this modern wildlife crisis is not unprecedented. In 1937, in response to dwindling wildlife populations, Congress passed the Federal Aid in Wildlife Restoration Act, known as "Pittman-Robertson" (PR). The law helped restore wildlife populations by establishing a federal role in funding state wildlife agencies (SWAs) which enabled these agencies to develop the infrastructure and expertise needed for effective wildlife conservation. Now, the 117th Congress is considering the Recovering America's Wildlife Act (RAWA) which would amend PR. If passed, RAWA would again transform wildlife conservation by providing state, tribal and territorial wildlife agencies the funding needed to meaningfully implement their State Wildlife Action Plans (SWAPs), federally required conservation roadmaps primarily related to the conservation of non-game wildlife. Though these plans were initially launched in 2005, a persistent lack of funding has prevented the realization of this program's potential. Herein, we explore the relationship between PR and RAWA while tracing the historical roots and ultimate passage of PR and discussing its successes and limitations. We also demonstrate how RAWA builds on and extends PR. Passage of RAWA could prove to be a generational accomplishment surpassing the importance of its forebearer.

"We must, I believe, with common accord agree that whatever we may have been doing is not wildlife conservation, since we continue to have less instead of more. A great gap has existed somewhere in our continental mechanism for wildlife conservation through which has leaked a constant and increasing loss which has drained many of our species to the vanishing point and left an inadequate population of all the rest."

This statement could describe the current state of wildlife conservation: climate change, habitat loss, and wildlife disease are driving alarming rates of population decline and species extinction (Diaz et al., 2019a, Stein et al., 2018). However, the statement was delivered by Jay N. "Ding" Darling 86 years ago, in 1936 (Darling, 1936, p. 17). While many of the threats to wildlife in Darling's era have been addressed, such as poorly regulated hunting of large mammals and substantial declines in waterfowl populations, today's scientists are issuing dire warnings about worldwide challenges faced by many current wildlife populations (Cebellos et al., 2015; Williamson, 1987).

In 1937, Congress heeded the warning of Darling and his colleagues by passing the Federal Aid in Wildlife Restoration Act, known as "Pittman-Robertson" (PR). This law has been critical to restoring wildlife populations by establishing a federal role in funding state wildlife agencies (SWAs). Reliable federal funding from PR has allowed these agencies to develop the research and monitoring infrastructure and expertise needed to effectively conserve and manage wildlife (Rutherford, 1949; Kallman, 1987). Now, the 117th Congress has the Recovering America's Wildlife Act (RAWA) before them. If passed, the law would again revolutionize funding for SWAs to address modern-day conservation challenges by providing states, tribes and territories the funding needed to meaningfully implement their State Wildlife Action Plans (SWAPs),

which are conservation roadmaps that have been required by Congress for over twenty years. It is no secret that RAWA and PR are linked. RAWA proposes to amend PR in its first sentence. What is less obvious is how similar the circumstances leading to the passage of PR were to the present, and how passage of RAWA could prove to be a generational accomplishment surpassing the importance of its forbearer.

1930'S CONSERVATION CRISIS

During his opening address at the first North American Wildlife Conference held in February 1936, Ding Darling spoke to 2,000 conservationists about "The Crisis." He called for a program to "rescue the wildlife population of this North American continent from extinction" (Darling, 1936, p. 16). The conference was held in Washington, D.C. and resulted from a call to action by President Franklin D. Roosevelt ("Darling Talks," 1936). During the conference, Darling, a Pulitzer Prize-winning cartoonist and former Chief of the U.S. Biological Survey (USBS) (now the U.S. Fish and Wildlife Service), was elected provisional President of the newly formed General Wildlife Federation (now the National Wildlife Federation (NWF)).

Just two years earlier, in 1934, the President's Committee on Wild Life
Restoration comprised of Darling, Professor Aldo Leopold and Thomas H. Beck
presented President Roosevelt with "A National Plan on Wild-Life Restoration." The
report was commissioned by Roosevelt and chronicled the "incontrovertible evidence of
a critical and continuing decline in our wild-life resources." It decried "scattered"
federal authority over wildlife, and offered solutions primarily based upon increasing
federal holdings of "submarginal lands" by millions of acres (Beck et al., 1934, pp. vivii). Although reliable estimates of wildlife declines from this era are not available,

considerable evidence from the era chronicles concerns over wildlife populations (Trefethen, 1979; Organ & McCabe, 2018). In Leopold's own 1930 report to the American Game Conference, he noted a loss of "[game]stock, range and even species" (Williamson, 1987, p. 2). The President's Committee was particularly troubled by declines in migratory waterfowl and also recommended restoration of upland game and songbirds as well as mammals such as "big game and fur bearers" (Beck et al., 1934, p. 1). Others have noted that the "drought, panic and poverty" of 1930's Dust Bowl era "whipped wildlife habitat destruction and poaching to a peak" (Williamson, 1987, p. 2). Driving these declines, westward expansion of agricultural lands and the corresponding retraction of wildlife habitat coincided with severe drought and high winds to compromise "the most productive duck breeding territory on the [North American] continent" (Trefethan, 1975, p. 218).

1930'S RESPONSE TO THE CONSERVATION CRISIS

The President's Committee's report largely succeeded in bringing wildlife issues to the attention of lawmakers, leading to significant increases in protected waterfowl habitat (Cart, 1972). Perhaps just as importantly, the sense of concern raised by the report persisted along with a seemingly minor component of the group's recommendations - using an existing federal tax on "arms and ammunition" for conservation funding (Beck et al., 1934, p. 2). This idea, however, did not originate with the committee; Professor Leopold had suggested using tax funds from sportsmen to help fund game management in 1930 (Organ, 2018).

Then in 1936, the organization that would later become the Association of Fish and Wildlife Agencies (AFWA) also recommended using the arms and ammunition tax to support wildlife restoration (Rutherford, 1949; Organ, 2018). Ding Darling and others revived this idea at the Second North American Wildlife Conference in March 1937. In his address, Darling described how the "nuisance tax," collected from sportsmen and deposited into the general treasury, "never comes out for wildlife or conservation," rather, it was spent on unrelated programs. He suggested the introduction of a bill "earmarking that money for conservation purposes" noting the opportunity for "coordination and cooperation between federal and state governments" (Darling, 1937, p. 245). This idea would solidify into Pittman-Robertson in a few short months.

On June 17, 1937, Senator Key Pittman (D-NV) introduced S. 2670 before the U.S. Senate followed a few days later by a companion bill in the House of Representatives submitted by Representative A. Willis Robertson (R-VA). Less than three months later, Congress passed Pittman-Robertson without opposition. The bill was signed into law by President Franklin D. Roosevelt on September 2, 1937 (Rutherford, 1949). As suggested by Leopold, Darling, and other conservationists, PR directed revenue from a federal excise tax on firearms and ammunition through the US Biological Survey (USBS) to individual SWAs, establishing federal and state wildlife restoration collaboration. State funding allocations were based upon both land area and number of hunting license holders, and states were required to cover 25% of the cost of federally approved projects with PR revenue reimbursing the balance (PR Act 16 U.S.C. 669-669i; 50 Stat. 917). PR funds were to be used for "wildlife restoration by the acquisition of lands and waters," for habitat enhancement, and for research related to

"the problems of wildlife management" (Rutherford, 1949, p. 11). Though PR's core framework persists today, the statute has been broadened to include tax revenue from handguns and archery equipment and to allow state spending for other purposes such as hunter education. Notably, in 1955 PR was amended to permanently authorize transfer of tax receipts, avoiding appropriation by Congress and ensuring reliable, dedicated funding for states (Organ, 2018).

PRESENT CONSERVATION CRISIS

The 2019 Global Assessment Report on Biodiversity and Ecosystem Services (Diaz et al., 2019b) offers warnings similar to those of Darling from 1936. "The overwhelming evidence ... presents an ominous picture. The health of ecosystems on which we and all other species depend is deteriorating more rapidly than ever." (IPBES, 2019) This warning by Sir Robert Watson, Chair of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) supported the release of the group's 2019 publication. The Global Assessment Report is produced by the IPBES, which is an independent intergovernmental body assembled by 94 governments and affiliated with the United Nations. Compiled by 150 experts and 350 contributing authors from around the world, the report cautions that one million plant and animal species are at risk of extinction globally. The group predicts an accelerated rate of species extinction "which is already tens to hundreds of times higher than it has averaged over the past 10 million years" (Diaz et al., 2019b, p. 12). IPBES scientists along with others also highlight extensive habitat loss and declines in both genetic diversity and species abundance along with the effects of rising global temperatures (Ceballos et al., 2017; Diaz et al., 2019a; Diaz et al., 2019b; Ceballos et al., 2020).

Similarly, scientists recently estimated that 3 billion North American birds have been lost since 1970 (Rosenberg et al., 2019). Other researchers have documented numerous extinctions in the U.S. and identified hundreds of species not seen in recent decades that are considered possibly extinct. Pollinators like bees and butterflies have also suffered significant declines. Monarch butterflies (*Danaus plexippus*), for instance, have "dwindled by 90 percent over the past two decades" (Stein et al., 2018, p. 3).

Moreover, as recently as September 2021, the U.S. Fish and Wildlife Service proposed removing 23 species from protections under the ESA due to apparent extinction (U.S. Department of Interior, 2021). Although proven methods exist to address this modern biodiversity crisis, "total [U.S.] spending over the past 15 years has covered only about one-third of species' recovery needs" (Stein et al., 2018, p. 8). At the state level, the bulk of federally allocated funding is directed to the conservation of the relatively small suite of game species, while the much larger group of non-game animals go largely underserved (Decker et al., 2018; Brown, 2021).

PRESENT RESPONSE TO THE CONSERVATION CRISIS

Like their Congressional predecessors in 1937, Representatives Debbie Dingell (D-MI), Jeff Fortenberry (R-NE) and a bipartisan group of House colleagues introduced RAWA before the U.S. House of Representatives on April 22, 2021 (H.R. 2773). On July 15, 2021, Senators Martin Heinrich (D-NM) and Roy Blunt (R-MO) introduced a companion version of RAWA in the U.S. Senate (S.2372). These filings mark the fourth iteration of RAWA before Congress. In most instances, it is difficult to succinctly describe why proposed legislation does not become law, and opinions on the matter may differ. In RAWA's case, previous versions of the bill enjoyed significant

legislative backing particularly in the U.S. House of Representative, but the tipping point of strong, bipartisan support in the U.S. Senate was not reached. However, the current bill has made significant progress in Congress with strong, bipartisan support in both the House and Senate (H.R. 2773, S.2372). The current House and Senate bills direct nearly \$1.4 billion per year to SWAs largely utilizing PR's existing allocation framework including the 25% state match requirement (H.R. 2773, S.2372).

The impetus for the original version of RAWA occurred in 2016 after a report by the Blue Ribbon Panel (BRP), a diverse group of 26 leaders from industry, sportsmen's groups and conservation organizations, assembled by AFWA. The Panel concluded that Congress should allocate "up to \$1.3 billion annually" to state wildlife conservation, funded through existing federal oil and gas tax revenue (Blue Ribbon Panel, 2016, p. 7). The panel arrived at this figure by estimating the shortfall between available SWA funding and the amount necessary to implement the agencies' SWAPs for over 12,000 animals in need of conservation.

Bolstering the BRP's recommendation, a 2018 collaborative report from the NWF, The Wildlife Society (TWS) and the American Fisheries Society urged RAWA's passage calling the bill's proposed \$1.3 billion in dedicated annual funding for state wildlife conservation a "once in a generation opportunity" for scaling-up the nation's conservation capacity (Stein et al., 2018, p. 25). Differing slightly from the BRP recommendation, the current versions of RAWA derive their funding from environmental fines and penalties via the General Treasury rather than directly from oil and gas revenue, and they direct an additional \$97.5 million annually to tribal wildlife agencies. Hundreds of business and conservation organizations along with over 1,700

scientists have endorsed RAWA's principles and urged passage of the previous bill (Bies, 2019).

PR SUCCESSES AND LIMITATIONS

So, if PR was successful in funding wildlife conservation, why is RAWA needed? Nearly eighty-five years after its passage, Pittman-Robertson is widely regarded among wildlife professionals as one of the most significant pieces of legislation in U.S. conservation history (Organ, 2018). Since its passage, PR has contributed over \$19 billion in direct conservation revenue to state and territorial wildlife agencies (Crafton, 2019). Decades before the passage of the Endangered Species Act of 1973 (ESA), populations of many now-common species such as white-tailed deer (*Odocoileus virginianus*), pronghorn (*Antilocapra americana*), elk (*Cervus canadensis*) and wild turkeys (*Maleagris gallopavo*) had declined dramatically, and the outlook for their persistence was bleak. Much of the credit for the recovery of these species is given to PR's reliable funding of SWAs (Trefethen, 1975).

For instance, in the early 1900s, white-tailed deer are estimated to have declined to less than 500,000 animals in the continental United States (Adams and Hamilton 2011). Through actions by SWAs, such as habitat restoration and science-based hunting regulations, white-tailed deer have rebounded to a U.S. population of over 30 million (Adams & Hamilton 2011). Additionally, within 10 years of PR's enactment, states had acquired nearly 900,000 acres of land for conservation, and that number has grown to more than 4,000,000 acres acquired and more than 40 million acres managed for wildlife purposes with PR dollars (Rutherford, 1949; The Wildlife Society, 2017). Most

importantly, PR funding enabled SWAs to transition from haphazard attempts at game conservation by enforcing arbitrary bag limits, to science-based wildlife and habitat management (Organ and McCabe, 2018; Regan & Williams, 2018). Though the core "arms and ammo" tax revenue is a funding cornerstone, PR's impact on SWA budgets from state hunting license sales stands at least equally important to the repurposed excise tax. On average, SWAs rely more heavily on these license receipts than direct PR funding (Organ, 2018). The critical role of hunting license revenue in SWA budgets is not an accident. Under the terms of the original act, in order to receive excise funding, states were required to pass legislation prohibiting the diversion of state hunting license revenue for any purpose other than the administration of the state wildlife agency.

This "anti-diversion" provision known as "Robertson's 29 words" was added by House sponsor A. Willis Robertson. The congressman's first read of the draft legislation that would become PR occurred during a lunch meeting with Carl Shoemaker, an attorney and publisher by trade, and the original author of the bill. As the men dined on Capitol Hill, Robertson, a former state wildlife commissioner, read Shoemaker's bill and promptly penciled-in the critical phrase ensuring that state hunting license receipts would be used only to fund state wildlife departments rather than being diverted to non-wildlife purposes (Williamson, 1987, pp. 10-11).

This provision, when combined with the underlying excise tax on guns and ammunition firmly cemented hunters and shooting enthusiasts as the primary funding source for state wildlife conservation, a relationship that has proven tremendously beneficial. In the absence of PR (and the companion Dingell-Johnson Sport Fish Restoration Act of 1950 (DJ)), it is unlikely that SWAs would possess a shadow of their

modern conservation capacity and expertise. The steady presence of PR's financial support for SWAs also makes it easy to take for granted the extraordinary conservation successes these agencies have achieved. However, this "user-pay, user-benefit" funding model has also led to criticisms that SWAs often are too beholden to hunters and anglers and disproportionately allocate resources to game species (Nie, 2004; Decker et al., 2016; Feldpausch-Parker et al., 2017).

While SWAs do employ non-game species conservation programs, they do so on a significantly smaller scale than for game conservation (Decker et al., 2018). Also, though game-centric conservation strategies can sometimes yield benefits to non-game species, many non-game and endangered species need more specialized, targeted interventions (Gallo & Pejchar, 2016; Decker et al., 2018; but see Wilson, 1995). Moreover, SWAs have rapidly come to the realization that to maintain relevance in society – and garner political support – their governance models need to change to be inclusive of all beneficiaries of the wildlife resource, from birdwatchers and hikers to hunters and snowmobilers (Decker et al., 2016). While it is beyond the scope of this paper to fully explore this topic, the discussion inevitably leads to a realization: wildlife conservation is a much bigger endeavor than envisioned eight decades ago. Many modern challenges are far more complex and costly to address than previously imagined. In retrospect, for the task of conserving whole ecosystems, PR's funding was critical, but never enough.

HOW RAWA BUILDS ON PR'S SUCCESSES

If passed by Congress and signed into law, RAWA would provide timely funding on the scale needed for ecosystem-level conservation in each state and territory. As noted by the BRP in 2016, the yearly influx of over \$1 billion would allow SWAs to meaningfully implement their State Wildlife Action Plans (SWAPs), which are conservation roadmaps required under the State and Tribal Wildlife Grants Program (Blue Ribbon Panel, 2016). By 2005, all U.S. states and territories had developed SWAPs marking "the first time in conservation history, the United States has coast-tocoast conservation planning coverage for fish and wildlife" (Decker et al., 2018, p. 153). This ambitious but chronically underfunded program, now over 20 years old, seeks to prioritize allocation of resources to species of greatest conservation need with hopes of avoiding critical thresholds requiring "emergency room" listing under ESA (Stein et al., 2018, p. 9). Notably, this program was created to help SWAs "proactively invest in fish and wildlife conservation strategies" and to assist them "in developing and implementing programs of benefit to wildlife and their habitats, particularly species not hunted or fished" (U.S. Fish and Wildlife Service, 2020, p. 13; Decker et al., 2018, p. 152).

In 2000, Congress established the State Wildlife Grants Program and a year later the Tribal Wildlife Grant Program (collectively, the State and Tribal Wildlife Grants Program, STWG). As noted, the primary purpose of both programs was to benefit nongame fish and wildlife, the animals who, by the nature of PR (and Dingell-Johnson) funding sources, have not received the same level of conservation effort as their game counterparts. In their over 20-year life spans, these programs have hinted at what is possible in interrupting the march from threatened to endangered to extinct for wildlife

populations (Decker et al., 2018). Every state, tribal and territorial wildlife agency can point to success stories where STWG funds were leveraged to improve the prospects of survival for species - from Trumpeter Swans (*Cygnus buccinator*) in Montana's Blackfoot Valley to River Otters (*Lontra canadensis*) in Washington, D.C. (U.S. Fish and Wildlife Service, 2020).

Unfortunately, funding for this program has not supported its significant potential for wildlife conservation. In just over two decades, cumulative program funding has amounted to about \$1 billion dollars; spread over 50 states, numerous tribal agencies and territories, this funding has allowed only limited implementation of these comprehensive plans (U.S. Fish and Wildlife Service, 2020). However, these projects suggest that, given adequate funding, SWAs possess the scientific expertise and infrastructure as well as the community and collaborative connections to make managing the over 12,000 species of greatest conservation need seem an achievable goal. RAWA would provide the level of funding necessary to meaningfully implement SWAPs, offering over 20 times the historical rate of funding on an annual basis (U.S. Fish and Wildlife Service, 2020). This, above all, is why RAWA can build upon and even surpass the success of PR.

Describing RAWA's "ounce of prevention" approach to conservation, NWF

President Collin O'Mara explained: "Simply put, it's more effective and less costly to
recover at-risk wildlife before a species is on the brink of extinction" (O'Mara, 2019).

Similarly, AFWA President and Director of the Missouri Department of Conservation

Sara Parker Pauley recently summarized: "[Hunting and fishing revenues] haven't
provided the necessary funding for everything that's at stake now ... Game species may

be doing ok, but we are losing the battle on this non-game side, and losing the battle on habitat" (Brown, 2021). The fact that over 80 years of PR tax revenue has now reached approximately \$19 billion in total funding to SWAs provides perspective on the significance of RAWA's proposed allocation of an additional \$1.4 billion per year to these agencies. RAWA would at last elevate the capacity of SWAs and their tribal counterparts to undertake management of the over 12,000 species identified for intensive conservation (Stein et al., 2018).

By almost any measure, the conservation paradigm heralded by PR has succeeded in developing a wildlife research and management infrastructure that positions states to address pressing conservation needs. Eighty years ago, faced with the potential to forever lose iconic wildlife species, lawmakers heeded the calls of scientists and passed PR. Today, with the benefit of decades of scientific advancement, it has again become clear that more conservation funding is needed (Blue Ribbon Panel, 2016). It is difficult to predict whether this Congress will prioritize addressing the present wildlife crisis, but if Congress does pass RAWA, it may indeed prove to be a "once in a generation" law that brings U.S. conservation funding into the 21st Century

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