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THE COMMERCE CLAUSE MEETS THE DELHI SANDS FLOWER-LOVING FLY

John Copeland Nagle*

God in His wisdom made the fly
And then forgot to tell us why.
— Ogden Nash

The protagonist in our story has six legs, is one inch long, and dies two weeks after it emerges from the ground. To the untrained eye, the Delhi Sands Flower-Loving Fly looks like, well, a big fly. Entomologists know better. This particular fly can hover like a hummingbird as it uses its long tubular nose to extract nectar from flowers. It can only live in particular fine soils — the Delhi sands — that appear in patches over a forty square mile stretch from Colton to Ontario, California. Today only a few hundred Delhi Sands Flower-Loving Flies survive in less than a dozen such patches located in an eight-mile radius split by I-10 and the Southern Pacific railroad tracks. Therein lies the Fly’s claim to fame. Of the 80,000 known species of flies, the Delhi Sands Flower-Loving Fly is the only one to be listed as endangered under the Endangered Species Act, and it is the only fly to divide the D.C. Circuit three ways concerning the meaning of the Commerce Clause.

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The Fly ended up in court because people wanted to use its habitat for other purposes. That anyone would want this land, home to a notorious hazardous waste site as well as the interstate and the railroad, is rather surprising. But the Fly earned the status of endangered under the Endangered Species Act (ESA) on the day before San Bernardino County planned to begin construction of a state-of-the-art hospital in the middle of the Fly's dwindling habitat. The ESA prohibits the "taking" of any endangered species, which has been interpreted to include "significant habitat modification or degradation where it actually kills or injures" a member of the species. The county responded to the ESA's takings provision by modifying its building plans, creating an eight-acre Fly refuge, and establishing a corridor of land connecting one Fly colony to another. The county made further concessions in exchange for permission to build an electrical power station for the hospital. But when the county learned that the Fly stood in the way of its plans to redesign an intersection used by emergency vehicles traveling to the hospital, the county filed suit challenging the application of the ESA to the habitat of the Fly. The county was joined by the National Association of Home Builders (NAHB) and several other trade groups that wished to build in the Fly's habitat, and by several municipalities that complained about the Fly's interference with their financial stability, land use planning, and projects of their own.

Disdaining more conventional weapons for fighting flies, the county turned to the Supreme Court's decision in United States v. Lopez. Lopez was the first case since the New Deal to hold that a

4. See William Booth, Developers Wish Rare Fly Would Buzz Off: Flower-Loving Insect Becomes Symbol for Opponents of Endangered Species Act, WASH. POST, Apr. 4, 1997, at A1 (noting that "the fly today shares its shrinking home with a cement quarry, a petroleum tank farm, a sewage plant and a Superfund site known ominously as the Stringfellow Acid Pits," and quoting a local official who characterized the site as "a bunch of dirt and weeds").

5. See FWS Fly Listing Decision, supra note 2; see also National Assn. of Home Builders, 130 F.3d at 1060 (Sentelle, J., dissenting) (noting that the FWS listed the Fly on the day before construction of the hospital was scheduled to begin).


7. 50 C.F.R. § 17.3 (1997); see also Babbitt v. Sweet Home Chapter of Communities for a Great Oregon, 515 U.S. 687 (1995) (upholding the Fish & Wildlife Service regulation defining "take" to include certain habitat destruction).


federal statute exceeded congressional power under the Commerce Clause. The Gun-Free School Zones Act of 1990\textsuperscript{10} suffered that fate because it fell outside all three categories of activities within the scope of the Commerce Clause: (1) the use of the channels of interstate commerce; (2) the instrumentalities of interstate commerce, or persons or things in interstate commerce; and (3) activities that have a substantial effect on interstate commerce.\textsuperscript{11} The Act lacked a jurisdictional statement that would have limited its application to cases involving interstate commerce, Congress did not make any findings about the impact that guns near schools have on interstate commerce, and the Court itself could not see any such connection even through the lens of the deferential rational basis test. The Court's approach precluded both the narrower formulation of Justice Thomas, who criticized the extension of congressional power to activities that merely substantially affect interstate commerce,\textsuperscript{12} and the broader formulation of Justice Breyer, who believed that guns near schools did substantially affect interstate commerce.\textsuperscript{13} The Court responded to Justice Breyer by insisting that any Commerce Clause test must leave some activities beyond the scope of federal authority; put negatively, a test that allows Congress to regulate anything in the name of interstate commerce is contrary to the limited, enumerated powers given Congress by the Constitution.\textsuperscript{14}

Whether \textit{Lopez} marks a dramatic shift in Commerce Clause jurisprudence or is instead destined to be a "but see" citation remains to be seen. The Court itself has already declined the invitation to invalidate statutes in several cases involving connections to interstate commerce that seemed even more tenuous than that in \textit{Lopez}.\textsuperscript{15} The lower federal courts have produced numerous split opinions regarding the consistency of a diverse group of federal

\begin{itemize}
\item \textsuperscript{10} 18 U.S.C. § 922(q) (1990).
\item \textsuperscript{11} \textit{See Lopez}, 514 U.S. at 558-59.
\item \textsuperscript{12} \textit{See} 514 U.S. at 584-602 (Thomas, J., concurring).
\item \textsuperscript{13} \textit{See} 514 U.S. at 618-25 (Breyer, J., dissenting).
\item \textsuperscript{14} \textit{See} 514 U.S. at 564 (protesting that Justice Breyer's dissent was "unable to identify any activity that the States may regulate but Congress may not"); 514 U.S. at 567 (stating that the Court was unwilling to conclude that "the Constitution's enumeration of powers does not presuppose something not enumerated").
\item \textsuperscript{15} \textit{See}, e.g., United States v. Robertson, 514 U.S. 669 (1995) (upholding the application of RICO to a defendant who invested illegal drug proceeds in a gold mine); Allied-Bruce Terminix Cos. v. Dobson, 513 U.S. 265 (1995) (sustaining the application of the Federal Arbitration Act to a termite protection contract signed by an Alabama homeowner); \textit{see generally} Deborah Jones Merritt, \textit{Commerce}, 94 Mich. L. Rev. 674, 731-38 (1995) (describing these cases and other recent Commerce Clause cases in which the Court denied certiorari).
\end{itemize}
statutes with the Commerce Clause. Federal environmental legislation has survived similar broad challenges so far, but some judges have been willing to hold that particular applications of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and of the wetlands provisions of the Clean Water Act violate the Commerce Clause.

San Bernardino and its friends attacked the application of the ESA to the protection of the Fly against this backdrop. They lost, first in the district court and then in a 2-1 decision in the D.C. Circuit. But unlike the district court and earlier courts to decide Commerce Clause challenges to the ESA, the three judges on the D.C. Circuit offered strikingly diverse explanations for why the ESA could—or could not—constitutionally require the protection of the Fly’s habitat. Judge Wald determined that the ESA’s takings provision fit within the first Lopez category—the use of the channels of interstate commerce—because Congress can con-


17. See United States v. Wilson, 133 F.3d 251 (4th Cir. 1997) (invalidating a regulation extending the jurisdiction of the Clean Water Act to waters whose degradation “could” affect interstate commerce); United States v. Olin Corp., 927 F. Supp. 1502 (S.D. Ala. 1996) (Hand, J.) (holding that CERCLA cannot be applied to an inactive hazardous waste site with no ongoing connection to interstate commerce), revd., 107 F.3d 1506 (11th Cir. 1997); see also Hoffman Homes, Inc. v. EPA, 999 F.2d 256, 262 (7th Cir. 1993) (Manion, J., concurring in the judgment) (concluding that the Commerce Clause prohibits the Clean Water Act from reaching isolated wetlands). Additionally, several commentators have expressed doubts about the consistency of the ESA and other environmental statutes with the Commerce Clause post-Lopez. See J. Blanding Holman IV, After United States v. Lopez: Can the Clean Water Act and the Endangered Species Act Survive Commerce Clause Attack?, 15 VA. ENVT. L.J. 139, 141 (1995) (concluding that the ESA’s takings provision “is at risk” until Congress acts to clarify the economic value of biodiversity); Stephen M. Johnson, United States v. Lopez: A Misstep, but Hardly Epochal for Federal Environmental Regulation, 5 N.Y.U. ENVT. L.J. 33, 78-79 (1996) (observing that “[f]ederal regulation of endangered species that are not articles of commerce may be the most difficult environmental regulation to justify after Lopez”); David A. Linehan, Note, Endangered Regulation: Why the Commerce Clause May No Longer Be Suitable Habitat for Endangered Species and Wetlands Regulation, 2 TEX. REV. L. & POL. 365, 367 (1998) (concluding that the ESA’s takings prohibition is “no longer defensible as [a] proper exercise[,] of congressional power under the Commerce Clause”); see also Suzanna Sherry, The Barking Dog, 46 CASE W. RES. L. REV. 877, 881 (1996) (describing the destruction of endangered species habitat by private landowners as “an activity only speculatively related to interstate commerce”).

trol the transportation of endangered species and because Congress can keep the channels of interstate commerce free from immoral uses.\textsuperscript{19} She also found that the takings provision fit within the third category — activities that substantially affect interstate commerce — because the statute protects biodiversity for current and future interstate commerce and because the statute avoids destructive interstate competition with respect to endangered species.\textsuperscript{20} Judge Henderson's concurrence agreed only that the statute satisfied the third category, albeit for different reasons than those articulated by Judge Wald.\textsuperscript{21} Judge Sentelle would have held that the ESA cannot be constitutionally applied to the habitat of the Fly because the case fell outside all of the \textit{Lopez} categories.\textsuperscript{22}

The explanation for their different explanations, in turn, is quite simple: each of the D.C. Circuit judges focused on a different question. Judge Wald asked whether there was a sufficient relationship between \textit{endangered species} and interstate commerce, concluding that there was. Judge Henderson asked whether there was a relationship between the \textit{hospital} and interstate commerce, again concluding that there was. By contrast, Judge Sentelle asked whether there was a relationship between the \textit{Fly} and interstate commerce, concluding that there was not.\textsuperscript{23}

This article explores who asked the right question. Whether the Commerce Clause empowers Congress to protect the habitat of the Fly depends upon the kind of connection to interstate commerce that is required. As discussed in Part I, the ESA constitutionally protects the habitat of the Fly if the appropriate inquiry examines the relationship between endangered species and interstate commerce, or the relationship between the hospital (or the housing developments sought by the NAHB) and interstate commerce. If, on the other hand, there must be a relationship between the Fly and

\begin{itemize}
\item \textsuperscript{19} See \textit{National Assn. of Home Builders}, 130 F.3d at 1046-49 (Wald, J).
\item \textsuperscript{20} See 130 F.3d at 1049-57 (Wald, J).
\item \textsuperscript{21} See 130 F.3d at 1057-60 (Henderson, J., concurring).
\item \textsuperscript{22} See 130 F.3d at 1060-67 (Sentelle, J., dissenting).
\item \textsuperscript{23} This is somewhat of an exaggeration insofar as Judge Wald did note the impact of the hospital on interstate commerce, see 130 F.3d at 1048, while Judge Henderson relied upon the narrower view of the impact of endangered species on interstate commerce as an alternative basis for her concurrence see 130 F.3d at 1058-59. I describe their focus as being on endangered species or the hospital, respectively, because Judge Wald spent much more time discussing endangered species than the hospital, whereas Judge Henderson's opinion gave the two topics about equal weight despite the nearly exclusive focus on endangered species adopted by the other courts and commentators to consider the question. See, \textit{e.g.}, \textit{Building Indus. Assn. v. Babbitt}, 979 F. Supp. 893, 906-08 (D.D.C. 1997) (explaining the relationship between endangered species and interstate commerce); Johnson, \textit{supra} note 17, at 77-82 (focusing on the relationship between endangered species and interstate commerce).
\end{itemize}
interstate commerce, the lack of such a relationship dooms the application of the ESA to the habitat of the Fly. The same result would obtain for the hundreds of other species that are not involved in, and exert no influence on, interstate commerce.

That these questions are raised in the context of the protection of an endangered species should not be surprising. Unlike the activities at issue in most of the Court’s Commerce Clause cases, there is no commerce in the Fly: no one buys it, sells it, or uses it to travel interstate. It is, quite simply, noncommercial. Yet Congress places a tremendous value on the protection of all endangered species,24 so Congress wants to prevent the Fly from disappearing from the earth, whether or not the Fly ever plays a noticeable role in human affairs. The Commerce Clause dilemma is whether Congress has the power to protect something that is very rare, very valuable, and seemingly entirely uninvolved with commerce between the states. It is a dilemma that transcends the preservation of endangered species and implicates federal efforts to protect historic buildings, scenic landscapes, works of art, and other valuable resources.

It is also a dilemma that has received little attention. The many pages that have been written regarding the proper understanding of the Commerce Clause have largely addressed the meaning of “commerce,” the appropriate judicial role with respect to the clause, and similarly abstract questions. Those are not my concerns here. Indeed, while I presuppose the existence of some judicial role in this context, I also am willing to assume that both Lopez and New Deal cases such as Wickard v. Filburn25 are correct. But however one views the extent of the relationship to interstate commerce demanded by the Commerce Clause, the question of exactly what must be related to interstate commerce remains. That is what divided the court in the Fly case, and it is what this article considers.

Part II examines three facets of that issue. First, section II.A considers the aggregation principle, made famous by Wickard, that allows Congress to consider the cumulative effect of similar activities on interstate commerce. What Wickard does not answer is the level of generality that Congress is permitted to use when aggregat-

24. See Tennessee Valley Auth. v. Hill, 437 U.S. 153, 174, 184 (1978) (observing that Congress wanted to afford endangered species “the highest of priorities” and to “reverse the trend toward extinction, whatever the cost”).

ing “similar” activities. The question raised by the Fly case is whether a statute based on a broader aggregation can constitutionally be applied to a narrow category that lacks the required substantial relationship to interstate commerce. If Congress can treat all endangered species alike and thereby regulate every species despite its lack of any connection to interstate commerce, then the scope of the Commerce Clause will be truly unlimited. I doubt Congress can do so. Second, section II.B asks whether Congress can rely upon the potential effect that an activity will have on interstate commerce. There are powerful reasons why Congress would want to do so: the value of many endangered species, for example, may not be known for years to come. Yet this seems problematic because it, too, could allow Congress to regulate anything because anything might affect interstate commerce someday. I suggest a middle ground that would empower Congress to act only if it can point to evidence providing a reasonable basis for believing that a particular resource will contribute to interstate commerce one day. Third, section II.C considers which activity must be related to interstate commerce. The choice of activities is important precisely because it often determines whether there is a sufficient relationship to interstate commerce to trigger the Commerce Clause. The problem is deciding whether the congressional means must be related to interstate commerce, or the congressional ends, or either, or both. The means of the ESA — in this case, prohibiting any building in the Fly’s habitat — have an obvious effect on interstate commerce, while the effect of the ends — preserving endangered species — is harder to prove. But either one should suffice. That still leaves some activities — imagine children walking barefoot through the Fly’s habitat — beyond the scope of the Commerce Clause, which preserves the Lopez insistence that a proper Commerce Clause test distinguish between those activities that Congress can regulate and those it cannot.

I. THE RIGHT ANSWERS

Judge Wald, Judge Henderson, and Judge Sentelle answered the Commerce Clause question raised by the application of the ESA to the Fly’s habitat by focusing upon endangered species, the hospital, and the Fly, respectively. Before considering which inquiry is correct, it is helpful to see where each path leads. The three different

26. See GEOFFREY R. STONE ET AL., CONSTITUTIONAL LAW 226 (3d ed. 1996) (suggesting that neither Wickard nor Lopez say how one determines what activities are sufficiently similar to be aggregated).
choices raise a number of questions about the necessary relationship to interstate commerce. These questions produce conflicting answers, so the fate of the ESA’s protection of the Fly’s habitat depends on which is the right question to ask.

A. The Relationship Between the Fly and Interstate Commerce

1. The Actual Relationship Between the Fly and Interstate Commerce

Suffice it to say that the Fly does not offer a noticeable contribution to the economy of San Bernardino County or anywhere else. The Fly does not possess any known medical value. Tourists do not flock to see it. People do not eat it. Scientists have searched in vain for any contributions that the Fly makes to human life. It is not the subject of the popular imagination or a key performer in the popular culture.27 Nonetheless, the government bravely suggested that the Fly was active in interstate commerce, and the district court agreed. That relationship was revealed by (1) the exhibition of the Fly in at least three museums located outside of California, (2) at least two instances where people outside of California purchased a Fly via an insect sales catalog, (3) people who traveled to California to observe and study the Fly, and (4) articles about the Fly in scientific journals.28 These are relationships to interstate commerce, but it is hard to maintain that they are the substantial relationships needed to invoke the Commerce Clause. Nor would other hypothetical — but easily manufactured — relationships suffice. The fact that I have plane tickets in hand to travel to California to visit the Fly may get me standing to object to any action that would harm the

27. Of course all flies suffer from this last indignity, not just the Delhi Sands Flower-Loving Fly. See FLY DRAFT RECOVERY PLAN, supra note 2, at 35 (proposing a public relations campaign “aimed at dispelling the public’s automatic association with, and disdain for, house flies”). For some of the rare instances in which flies have gained some popular attention, see The FLY (Twentieth Century Fox Film Corp. 1986) (starring Geena Davis and Jeff Goldblum); The FLY (Twentieth Century Fox Film Corp. 1958) (starring Vincent Price); and my personal favorite, Mike McClintock, A FLY WENT BY (1958).

Fly, but it will not trigger the power of Congress to invoke the Commerce Clause. Likewise, the availability of souvenirs depicting a seemingly obscure endangered species should not tie the species to interstate commerce because the ability to market products featuring a species may actually be enhanced if the species becomes extinct. Perhaps the most telling criticism of the adequacy of these relationships is that Judge Wald abandoned any contention that the Fly itself actually affects interstate commerce, despite her various other theories supporting the reach of the ESA's takings provision in this case.

It is unlikely, therefore, that the Fly can be shown to have an actual, substantial relationship with interstate commerce. But even if one determined that the evidence that the district court recited was sufficient, that would not resolve the constitutionality of the ESA in other cases. Other endangered species are harder to connect to interstate commerce than the Fly. The primary habitat of the recently listed Peck's cave amphipod is "a zone of permanent darkness" in a single underground aquifer in Texas. The Cowhead Lake tui chub is a three inch minnow with no known commercial or recreational value that is found only in one three mile stretch of water in rural northern California. The Deseret milk-vetch is even more reclusive, thought to be extinct for seventy-two years prior to its rediscovery on one 300-acre site in central Utah. There are many such species that survive only in one state, that were long thought to be extinct, that are quite similar in function to other species, or for which there is no discernible commerce — and there are some species that possess all of those characteristics. Indeed, the litigation over the Fly itself has already prompted landowners to claim that the federal government lacks the authority to list the Illinois cave amphipod because that species does not af-


32. See Endangered and Threatened Wildlife and Plants; Proposed Threatened Status for the Plant Astragalus Desereticus (Deseret milk-vetch), 63 Fed. Reg. 4,207 (1998) (to be codified at 50 C.F.R. pt. 17) [hereinafter FWS Deseret Milk-Vetch Listing]. Note that the plant appears to be tasty to cattle, see id. at 4,209, and that plants do not receive the protection of the ESA's takings prohibition, although plants on federal land cannot be removed, maliciously damaged, or destroyed, see 16 U.S.C. § 1538(a)(2)(B) (1994).
fect interstate commerce. So even if one would strain to identify a connection between the Fly and interstate commerce, someday another case involving an even more obscure species would raise the same questions.

2. The Potential Relationship Between the Fly and Interstate Commerce

Judge Wald speculated that “it is not beyond the realm of possibility” that the Fly could contribute to the pollination of America’s farms. Likewise, one would expect that scientists could surely learn something from the Fly, especially since the Delhi Sands Flower-Loving Fly is the last subspecies of its species, and one of only a few left in its zoological family. The decision to protect the Fly also recognizes the importance of the continuing availability of a wide variety of species to interstate commerce, a variety that demands a large number of species but no one species in particular. Judge Wald wrote that “diminishing a natural resource that could otherwise be used for present and future commercial purposes” ties all species, including the Fly, to interstate commerce. More sarcastically, Judge Sentelle’s concern about the consequences that would follow if a Fly splattered on the windshield of a car would become even greater if the car was traveling across state lines.

Each of these arguments relies upon the effect that the Fly could have on interstate commerce. There is no evidence to support any of the claims at this time. Thus Judge Henderson objected that “it is possible that no endangered species will ever realize an uncertain potential medical or economic value.” But it would be presumptuous to contend that we know everything there is to know about the Fly and its relationship to natural processes or human activities. Indeed, the unknown benefits of a species are routinely cited as a reason for protecting the species, even when we have not identified

35. See FWS Fly Listing Decision, supra note 2, at 49,881.
37. National Assn. of Home Builders, 130 F.3d at 1053 (Wald, J.) (“A species whose worth is still unmeasured has what economists call an ‘option value’ — the value of the possibility that a future discovery will make useful a species that is currently thought of as useless.”) (citing Bryan Norton, Commodity, Amenity, and Morality: The Limits of Quantification in Valuing Biodiversity, in BIODIVERSITY 200, 202 (Edward O. Wilson ed., 1988)).
38. See National Assn. of Home Builders, 130 F.3d at 1061 (Sentelle, J., dissenting).
those benefits to date. Thus it is possible that the Fly could yield valuable services to human society once we manage to discover them. Meanwhile, our inability to know whether the Fly can be valuable or not makes us unable to know whether the Fly will substantially affect interstate commerce or not.

B. The Relationship Between Endangered Species and Interstate Commerce

1. The Relationship Between Endangered Species Generally and Interstate Commerce

There is a substantial relationship between endangered species writ large and interstate commerce. Congress stated that the ESA is necessary because “species of fish, wildlife, and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people.” Consider each of these values. The aesthetic and recreational worth of endangered species is demonstrated by the millions of people who travel to see whales, bald eagles, grizzly bears, whooping cranes, and other rare animals throughout the country. Such ecotourism accounts for billions of dollars annually in the surrounding communities. The ecological value of endangered species refers to the role that animals and plants play in promoting air and water quality, regulating the climate, removing unwanted pests, creating and protecting soil, controlling floods and droughts, pollinating crops, protecting the earth from ultraviolet rays, and dispersing seeds and nutrients. Endan-

40. See National Assn. of Home Builders, 130 F.3d at 1053 (Wald, J.); Charles C. Mann & Mark L. Plummer, Noah’s Choice: The Future of Endangered Species 121-22 (1995) (observing that “biologists frequently liken the world’s biodiversity to a library in which the vast majority of books have never been read . . . . Reading the books in the species library once will not be enough . . . . Each generation will profit from reading them over and over again.”).


42. See James D. Caudill, 1991 Economic Impacts of Nonconsumptive Wildlife-Related Recreation 6-7 (1997) (Fish & Wildlife Service report finding that the 76 million Americans who watched, photographed, and fed birds and other wildlife in 1991 spent $18.1 billion on those activities); U.S. Brief, supra note 28, at 19, 23 & n.12, 26-27 (providing examples of the commercial and tourism value of endangered species); see also John Copeland Nagle, Playing Noah, 82 Minn. L. Rev. 1171, 1209-11 (1998) (citing additional sources).

43. See Endangered Species Act — Bakersfield, California: Hearing Before the Task Force on Endangered Species of the House Resources Comm., 104th Cong., 1st Sess. 27 (1995) (testimony of Arthur D. Unger, Kern-Kaweah Chapter of the Sierra Club) (noting that wasps can be used to control certain breeds of flies); Mann & Plummer, supra note 40, at 123; Nature’s Services (Gretchen C. Daily ed., 1997) (collecting essays written by different specialists on the value of services provided by marine ecosystems, freshwater ecosystems, forests, and grasslands with respect to soil, pollination, and pest control); Nagle, supra note 42, at 1211-16 (citing additional sources).
gered species serve an educational and scientific function by teaching us about ourselves and the world in which we live. Historical benefits come from bald eagles and other species that have a special place in our national consciousness.\footnote{Cf., e.g., Nagle, \textit{ supra} note 42, at 1196 (describing the ESA listing of the California Red-Legged Frog memorialized by Mark Twain as the Celebrated Jumping Frog of Calaveras County).}

There are other benefits that Congress did not mention in its purpose statement for the ESA. Most importantly, endangered plants and animals may be an important source of drugs and other medical treatments.\footnote{See \textit{ Medicinal Uses of Plants; Protection for Plants Under the Endangered Species Act: Hearing Before the Subcomm. on Envt. and Natural Resources of the House Comm. on Merchant Marine and Fisheries}, 103d Cong. (1993) (discussing the efforts to obtain medicine from plants); \textit{ H.R. Rep. No. 93-412}, at 4-5 (1973); \textit{ S. Rep. No. 91-526}, at 3 (1969), \textit{ reprinted in 1969 U.S.C.C.A.N. 1413, 1415}; \textit{ Mann \& Plummer, supra note 40}, at 120-21 ("Bark from the white willow gave us salicin, an ancient version of aspirin; the Grecian foxglove provided digoxin, a cardiac medication; bear bile is the origin of ursodiol, a gallstone dissolver; deadly nightshade led to atropine, an eye dilator and anti-inflammatory; the velvet bean produced L-dopa, a treatment for Parkinson's disease; and everyone knows the story of penicillin, the bacteria slayer discovered accidentally in a mold."); \textit{ Edward O. Wilson, The Diversity of Life} 285-86 (1992); \textit{ Thomas E. Lovejoy, Biodiversity: What Is It?, in Biodiversity II: Understanding and Protecting Our Biological Resources} 7, 9 (Marjorie L. Reaka-Kudla et al. eds., 1997).} Several plants are being studied in an effort to find a cure for AIDS.\footnote{See \textit{ Nagle, supra note 42}, at 1208 n.140 (citing sources).} Likewise, the nutritional value of endangered species is seen in the nearly billion dollars that genes from wild plant species add to agricultural production in the United States each year.\footnote{See \textit{ Endangered Species Act: Washington DC — Part II: Hearing Before the Task Force on the Endangered Species Act of the House Comm. on Resources}, 104th Cong. 190 (1995) (quoting the statement of the National Wildlife Federation); \textit{ see also} Norman Myers, \textit{ Biodiversity's Genetic Library, in Nature's Services, supra note 43}, at 256-59 (describing how wild corn, wild rice, and other rare species can provide food to humans).}

Each of these reasons for protecting endangered species is easily linked to interstate commerce. Other reasons, especially the moral and religious arguments for the preservation of endangered species, are less readily tied to interstate commerce.\footnote{See \textit{ generally Nagle, supra note 42}, at 1216-47 (recounting the moral, ethical, and religious arguments for protecting endangered species).} Likewise, many endangered species are found in more than one state, though why that serves to justify federal regulation under the Commerce Clause has never been clear to me.\footnote{Both sides in the Fly case contended that the case had ramifications for all endangered species that live in only one state, though they never explained why species that live in more than one state are so plainly within the scope of congressional jurisdiction. A similar rule exists with respect to federal regulation of wetlands under the Clean Water Act: if a migratory bird crosses state lines to a particular body of water, that trip places the water within the scope of congressional power. \textit{ See Elaine Bueschen, Comment, Do Isolated Wetlands Substantially Affect Interstate Commerce?}, 46 \textit{ Am. U. L. Rev.} 931, 941-43 (1997). Why}
the movement of the species themselves, the utilitarian values cited by Congress when it enacted the ESA provide ample grounds for concluding that the protection of endangered species bears a substantial relation to interstate commerce.

2. The Relationship Between Each Endangered Species and Interstate Commerce

The Commerce Clause would plainly be inadequate as a constitutional basis for the ESA if each protected species were required to possess an actual medicinal, nutritional, or other specific value. The countless benefits provided by endangered species as a class do not mean that every endangered species offers utilitarian benefits. Most species are of no nutritional value to humans. Efforts to identify plants and animals with medicinal uses have identified far more useless species than helpful ones. Tourists are far more likely to visit bald eagles or manatees than fairy shrimp or the Deseret milk-vetch. In short, "biodiversity as a whole has overwhelming utilitarian value, but most individual species do not."50

Nonetheless, there are two ways to try to tie every endangered species to interstate commerce: the ecosystem argument and the biodiversity argument. The ecosystem argument relies upon the ecological truism that the loss of any individual species affects the ecosystem of which it is part.51 The argument has several problems.

50. Mann & Plummer, supra note 40, at 133; accord Ronald Dworkin, Life's Dominion: An Argument About Abortion, Euthanasia, and Individual Freedom 75 (1993) (arguing that none of the utilitarian arguments for protecting endangered species "rings true"); Holmes Rolston III, Environmental Ethics: Duties to and Values in the Natural World 130 (1988) (admitting that "[a] substantial number of endangered species have no resource value"); Oliver A. Houck, Why Do We Protect Endangered Species, and What Does That Say About Whether Restrictions on Private Property to Protect Them Constitute "Takings", 80 Iowa L. Rev. 297, 298 (1995) (acknowledging that "endangered species are, for the most part, no more aesthetically attractive than other species, provide little historical insight, and are on the margins of recreational demand and scientific discovery"); Nagle, supra note 42, at 1211-16 (describing the lack of utilitarian value of most species in greater detail); Zygmunt J.B. Plater, The Embattled Social Utilities of the Endangered Species Act — A Noah Presumption and Caution Against Putting Gasmasks on the Canaries in the Coalmine, 27 Envtl. L. 845, 851, 853 (1997) (describing the utilitarian reasons as "make-weights," and suggesting that the utilitarian arguments are "valid, but seem to be somewhat leveraged, grasping at straws. The vast majority of endangered species probably will not cure cancer.").

51. See National Assn. of Home Builders v. Babbitt, 130 F.3d 1041, 1052 n.11 (D.C. Cir. 1997) (Wald, J.) (explaining that "every species has a place in the ecosystem"); National
It appears to exaggerate the indispensability of each species within an ecosystem. Biologists believe that species come and go all the time, so it is hard to contend that the disappearance of any one species is catastrophic. Nor does the ecosystem argument explain why we need to protect a species that we think we can do without, or a species that we thought we were doing without already. For example, the nearest relative to the Fly is extinct, with no apparent effect on the ecosystem, let alone interstate commerce. Similarly, several of the species recently proposed for listing as endangered by the Fish and Wildlife Service were long thought to be extinct, again without any noticeable adverse consequences for their ecosystem or for interstate commerce. It is hard to imagine how a species that has a minor effect on the functioning of its ecosystem nonetheless exerts a substantial effect on interstate commerce.

And even if a species plays a key role in its ecosystem, the ecosystem argument connects the species to interstate commerce only if the ecosystem itself contributes to that commerce. An isolated ecosystem may not provide such contributions. Moreover, as Mark Sagoff argues, the very notion of a static ecosystem is itself problematic. If the Fly disappears, the ecosystem will change. But if the Fly does not disappear, the ecosystem will change. And if

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53. See FWS Deseret Milk-Vetch Listing, supra note 32, at 4,207 (describing a plant that had been considered extinct for 72 years); Endangered and Threatened Wildlife and Plants; Proposed Endangered Status for Erigeron decumbens var. decumbens (Willamette Daisy) and Fender's Blue Butterfly (Icaricia icarioides fenderi) and Proposed Threatened Status for Lupinus sulphureus ssp. kincaidii (Kincaid's lupine), 63 Fed. Reg. 3,863, 3,865 (1998) (noting that Fender's blue butterfly was not seen from 1937 to 1989); Endangered and Threatened Wildlife and Plants; Proposed Threatened Status for the Plant Thelypodium howellii ssp. spectabilis (Howell's spectacular thelypod), 63 Fed. Reg. 1,948 (1998) (indicating that a flower had been thought extinct until rediscovered in 1980).

54. See Johnson, supra note 17, at 81 (arguing that the role of a species in its ecosystem supports federal regulation "to the extent that endangered species live in ecosystems that produce articles of commerce, or that are used for commercial purposes").

55. See Mark Sagoff, Muddle or Muddle Through? Takings Jurisprudence Meets the Endangered Species Act, 38 WM. & MARY L. REV. 825, 931-32 (1997) (describing ecosystems as "unstructured, transitory, and accidental in nature"); see also id. at 893-902 (noting the difficulties inherent in defining an ecosystem).
we manage to actually increase the population of the Fly, the ecosystem will change too. Something more, then, is needed to ground the Fly's Commerce Clause connection on the health of the ecosystem of which it is a part.

The ecosystem argument works if a species is crucial to an ecosystem that plays a role in interstate commerce. The brief filed by the environmental groups intervening on behalf of the Fly claims just such a connection among the Fly, the Colton Dunes ecosystem of which it is a part, and the broader economy. The Fly serves at least two functions within the Colton Dunes: it pollinates two native species of plants, and its disappearance sounds an alarm that the ecosystem itself is in danger. The Colton Dunes is important as one of a decreasing number of isolated ecosystems that are crucial to the development of new species. The preservation of the Fly will assure the preservation of the Colton Dunes, and the preservation of isolated ecosystems like that one provides the requisite nexus to interstate commerce. But there is no evidence that the Colton Dunes itself is substantially related to interstate commerce; its significance lies as a representative example of an isolated ecosystem. The ecosystem argument on behalf of the Fly, therefore, requires a showing that isolated ecosystems in general are a permissible object of Commerce Clause legislation, even absent a relationship between the Fly's own ecosystem and interstate commerce.

Judge Wald and Judge Henderson relied upon a second approach for connecting each endangered species to interstate commerce. The biodiversity argument insists that the availability of a large number of animal and plant species has a substantial effect on interstate commerce. Each species is important under this argument because it is the number of species that matters, not the characteristics of any particular species. Biodiversity is valuable

56. See Envtl. Brief, supra note 52, at 4, 14.

57. The "canary-in-the-mine" function of endangered species refers to the way in which the loss of one species may serve as an early warning that the rest of the ecosystem is in danger. See Nagle, supra note 42, at 1210-11. It is one of the most common justifications for the protection of all endangered species. See id. at 1213 (citing sources).

58. See National Assn. of Home Builders v. Babbitt, 130 F.3d 1041, 1050 (D.C. Cir. 1997) (Wald, J.) (concluding that "one of the primary reasons that Congress sought to protect endangered species from 'takings' was the importance of the continuing availability of a wide variety of species to interstate commerce"); 130 F.3d at 1052 (Wald, J.) (noting that "current and future interstate commerce . . . relies on the availability of a diverse array of species"); 130 F.3d at 1053 n.14 (Wald, J.) (asserting that "biodiversity has a real, substantial, and predictable effect on . . . interstate commerce"); 130 F.3d at 1058 (Henderson, J., concurring) (agreeing that "the loss of biodiversity itself has a substantial effect on our ecosystem and likewise on interstate commerce").
because it improves the probability that we will find a species that possesses the medicinal, nutritional, or other benefit that we seek. The likelihood of finding a cure for AIDS or for cancer is greater if there are millions of species of plants to investigate for possible resources instead of only hundreds of species of plants available. Biodiversity’s value is further demonstrated by the consequences of its absence. Certain kinds of species provide services that would be lost even if most other species survived. For example, the Fly is one of a decreasing number of “native pollinator” species that pollinate crops throughout the country. If the number of such native pollinator species drops, the billions of dollars of ecological services they provide will drop too.

C. The Relationship Between the Hospital and Interstate Commerce

The Fly is competing with people who want to occupy its habitat. San Bernardino County chose the site for its new regional hospital, and it then needed an electrical power station and a redesigned intersection to serve the hospital. The construction of the hospital presumably used materials and workers from outside of California, and once operating the hospital certainly expected to attract employees, patients, and students from other states as well. The electrical substation constructed in the Fly’s habitat no doubt possessed similar connections to interstate commerce. So would the proposed redesigned traffic intersection. The Fly’s habitat also lies within an enterprise zone established to facilitate commercial investment in the area. The residential housing developers could be expected to rely upon similar out-of-state materials and

59. See Envtl. Brief, supra note 52, at 4 (crediting the Fly with pollinating buckwheat, and perhaps croton and telegraph weed as well); id. at 14 (noting that “cashews, squash, mangos, cardamon, cacao, cranberries, and highbush blueberries are pollinated primarily by wild insects”).

60. See id. at 14.

61. See National Assn. of Home Builders, 130 F.3d at 1048 (Wald, J.); see also 130 F.3d at 1059 (Henderson, J., concurring) (agreeing that the intersection and the hospital each have “an obvious connection with interstate commerce”).


63. See National Assn. of Home Builders, 130 F.3d at 1056 (Wald, J.); 130 F.3d at 1059 (Henderson, J., concurring).

64. See NAHB Brief, supra note 62, at 13.
personnel if they were allowed to proceed with their planned construction at the site.\textsuperscript{65}

These connections to interstate commerce match the relationships that the Court held sufficient in the cases challenging the Civil Rights Act of 1964. The fact that seventy-five percent of the guests of the Heart of Atlanta Motel were from outside of Georgia and the proximity of the motel to two interstate highways provided the necessary substantial effect on interstate commerce.\textsuperscript{66} The purchase of forty-six percent of its meat from a local supplier who obtained it from outside of Alabama placed Ollie’s Barbeque within the scope of the Commerce Clause power.\textsuperscript{67} The construction of the hospital, electrical substation, traffic intersection, and housing developments in the Fly’s habitat are thus substantially related to interstate commerce.

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The foregoing discussion reveals three clear relationships to interstate commerce: (1) endangered species generally are substantially related to interstate commerce by virtue of the many utilitarian roles that they perform; (2) someday the Fly could have a substantial effect on interstate commerce; and (3) the county hospital and the housing developments desired by the NAHB would rely upon materials, employees, and other connections to interstate commerce. By contrast, the Fly itself does not have an actual, substantial effect on interstate commerce, notwithstanding the slight connections that the government advanced and the district court cited. Whether every endangered species is connected to interstate commerce because every species plays an irreplaceable role in its ecosystem is harder to judge. There appear to be many species without which the ecosystem and interstate commerce would continue unaffected, but Congress apparently concluded otherwise, and that might be sufficient for a court applying the deferential rational basis test. The biodiversity argument offers an even more convincing way of emphasizing the importance of the preservation of every species. But the fact that the answers to these questions are not all the same shows that the constitutionality of applying the ESA’s tak-

\textsuperscript{65} See Anne M. Peterson, \textit{Federal Permit Required Before Tract Construction: Environmentalists Say the Fontana Site is Home of Endangered Delhi Sands Flower-Loving Fly}, \textit{The Press-Enterprise}, Aug. 20, 1998, at B1 (reporting that the FWS has notified a developer that it must get a permit before building 202 homes on the habitat of the Fly).


ings provision to the development of the Fly's habitat depends upon the question a court asks.

II. The Right Question

That brings us to the "Jeopardy" portion of the article. Having answered the questions posed above, it remains to determine the appropriate question. This choice of questions requires consideration of three more questions. First, what is the appropriate level of aggregation when comparing an activity to interstate commerce? Second, can a potential effect on interstate commerce ever qualify as a substantial effect? Third, what is the activity that must be connected to interstate commerce? Surprisingly, the abundant Commerce Clause litigation and literature has not resolved any of these issues. Lopez and the New Deal cases direct their attention elsewhere, as do most academics. Yet these questions offer the possibility of greatly expanding or reducing the scope of the Commerce Clause, thereby advancing through the back door arguments that constitutional precedent and theory block directly.

Each of these questions can be answered in a way that affirms the exercise of federal jurisdiction over the Fly's habitat and countless other activities wholly unrelated to environmental law, but only if one is willing to abandon the Court's insistence in Lopez that an appropriate test for the Commerce Clause cannot justify federal legislation of everything.68 I will not abandon that principle because it lies at the heart of Lopez.69 There are, of course, strong arguments against that principle and against Lopez itself. Perhaps the Court's insistence that there must be some activities that lie outside the scope of the Commerce Clause is inconsistent with the terms of the Commerce Clause itself, as Robert Nagel has argued.70 Perhaps another test would better capture the meaning or purpose of the Commerce Clause.71 Or perhaps it would be wise for the

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68. See supra text accompanying note 14; see also National Assn. of Home Builders, 130 F.3d at 1064 (Sentelle, J., dissenting) (reading Lopez to require that "the rationale offered to support the constitutionality of the statute . . . has a logical stopping point so that the rationale is not so broad as to regulate on a similar basis all human endeavors, especially those traditionally regulated by the states") (citing United States v. Wall, 92 F.3d 1444, 1455-56 (6th Cir. 1996) (Boggs, J., dissenting in part)).

69. See Merritt, supra note 15, at 686 (observing that the rejection of the idea that Congress possesses unlimited power under the Commerce Clause "may have been the primary point of the decision"); id. at 712 (suggesting that the same point "may have been the most influential one of all in Lopez").


courts simply to allow Congress to regulate everything that it wants. Each of those views has its proponents, but I do not wish to enter that debate here. Instead, I presume that the general test stated in *Lopez* and the New Deal cases is appropriate, and that any understanding of that test must conform to the Court’s insistence that the Commerce Clause cannot be interpreted in a way that justifies any federal legislation.

So viewed, the aggregation of all endangered species and the reliance upon the Fly’s unknown future effect on interstate commerce become problematic because both arguments would justify any federal legislation. Consideration of the effect of the hospital, the traffic intersection, and the construction of housing within the Fly’s habitat would be acceptable because that approach posits other activities that lie outside of the scope of congressional power. That means, however, that those other activities — especially the proverbial children walking barefoot through the Fly’s habitat — could not be regulated by Congress, and an application of the ESA’s takings provision in that context would be unconstitutional.

### A. The Aggregation Problem

The Commerce Clause empowers Congress to regulate three categories of activity provided that it identifies an adequate relationship to interstate commerce. One way in which Congress can ensure this relationship is by including a jurisdictional provision limiting the law’s scope to activities that are substantially related to interstate commerce. The regulations governing the Clean Water Act, for example, rely on such a provision to guarantee that a regulated body of water has the necessary relationship to interstate commerce. The ESA does not contain a jurisdictional provision, but that alone does not invalidate the statute. The second route
available to Congress is to make findings about the effect of members of the category on interstate commerce. The ESA contains several findings about the importance of endangered species and about the effects of commercial activity on endangered species, but no findings which describe the effects of endangered species on interstate commerce. The findings in the ESA’s legislative history are more helpful, though, reciting the importance of biodiversity in providing potential resources for commerce, medicine, and other human activities. To no one’s surprise, Congress neglected to make any findings about the Fly, so the authority to regulate the Fly’s habitat depends upon Congress’s ability to act based on the cumulative effect of other endangered species and of biodiversity as a whole.

At first glance, this would seem to be easy because of Wickard v. Filburn. For better or worse — and the Lopez majority would side with those saying “worse” — Wickard has come to stand for the proposition that the constitutionality of an exercise of congressional power under the Commerce Clause is measured not by an isolated examination of each individual’s actions, but by the aggregate effect of all similarly situated actors. This reading of Wickard emphasizes that even if the Fly does not exert a substantial effect on interstate commerce, it is but one of many endangered species whose collective effect on interstate commerce is unquestionably substantial.

That comparison blurs the kind of aggregation that the Court employed in Wickard. The statute that Roscoe Filburn was accused of violating — the Agricultural Adjustment Act of 1938 — regulated the marketing of tobacco, corn, cotton, rice, peanuts, and


75. See 16 U.S.C. § 1531(a)(1) (finding that species “have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation”); H.R. 37, 93d Cong., § 2(a) (1973) (proposing congressional finding that “one of the unfortunate consequences of growth and development in the United States and elsewhere has been the extermination of some species or subspecies of fish and wildlife”).

76. See H.R. Rep. No. 93-412, at 5 (1973) (describing species as “potential resources” that “may provide answers to questions which we have not yet learned to ask” and speculating about possible medical benefits); S. Rep. No. 93-307, at 2 (1973) (indicating that “many of these animals perform vital biological services to maintain a ‘balance of nature’ within their environments” and that biological diversity is needed for scientific purposes).

77. 317 U.S. 111 (1942). For a detailed retelling of the events underlying Wickard, see Jim Chen, Foreword: Filburn’s Forgotten Footnote — Of Farm Team Federalism and Its Fate, 82 MINN. L. REV. 249, 276-305 (1997).

78. See United States v. Lopez, 514 U.S. 549, 560 (1995) (describing Wickard as “perhaps the most far reaching example of Commerce Clause authority over intrastate activity”).
wheat. The specific regulation that applied to Filburn governed only wheat. In 1941, Mr. Filburn harvested 239 more bushels of wheat than he was allowed by that regulation, but he contended that the extra amount was not involved in interstate commerce because he used it on his own farm for livestock feed and for other personal consumption. Justice Jackson’s opinion for the unanimous Court rejected that argument because the effect of wheat grown for personal consumption had an effect on interstate commerce by deflating the demand for — and thus the price of — wheat grown elsewhere. Moreover, the government presented evidence that wheat grown for personal consumption was “the most variable factor in the disappearance of the wheat crop,” with more than twenty percent of the wheat grown in the United States used for such personal consumption. The cumulative effect of wheat grown for personal use did, therefore, yield a substantial effect on interstate commerce.

That result depended upon an aggregation of the wheat grown by Filburn for his personal use coupled with the wheat grown by all other farmers for their personal use. The relevant category, then, was “all wheat grown by farmers for their personal use.” This was not the broadest possible category. A broader category consistent with the reach of the statute would have been “all tobacco, corn, cotton, rice, peanuts, and wheat grown by farmers for their personal use.” An even broader category — albeit one that moves beyond the commodities covered by the statute — would have encompassed “all agricultural products produced by farmers for their own personal use.” In other words, the interstate commerce effect would be measured by adding Filburn’s wheat to Filburn’s milk and chicken and eggs, to the produce of Iowa corn farmers and North Carolina tobacco growers and California rice farmers. And it is that step that is required to move from the Fly to all endangered species.

Judge Wald appeared to accept the government’s argument in National Assn. of Home Builders that the appropriate level of aggregation is “all endangered species,” the class subject to the ESA’s

80. See Wickard, 317 U.S. at 124-29.
81. See Wickard, 317 U.S. at 127.
82. See Wickard, 317 U.S. at 114 (noting that Filburn “for many years past has owned and operated a small farm in Montgomery County, Ohio, maintaining a herd of dairy cattle, selling milk, raising poultry and selling poultry and eggs”).
takings provision. Wickard, however, did not go so far as to aggregate all of the statutorily regulated crops with Mr. Filburn's wheat. Judge Wald further asserted that Wickard is analogous to the Fly case because Congress enacted the ESA to regulate the quantity of species, whereas Wickard involved the quantity of wheat. She is correct that Congress was concerned about the quantity of species and that the ESA was designed to protect that amount. But as applied to the Delhi Sands Flower-Loving Fly, the contested provision of the ESA prohibits the taking of any individual Fly, whether or not the loss of that Fly will result in the extinction of the species. To be sure, Congress might well want to ban the taking of any Fly because the loss of any individual Fly poses a serious threat to the existence of the species. That, however, is a slightly different argument than the one advanced by Justice Jackson. Wickard found the requisite connection between interstate commerce and the wheat consumed by Mr. Filburn on his own farm because there was a relationship between the nationwide demand for wheat and the amount of wheat grown for personal use by Mr. Filburn and others similarly situated. By contrast, if San Bernardino County's hospital or a new housing development wipes out one or more Flies without extinguishing the species, there will still be the same number of species. The analogy to Wickard requires an additional step: it is not sufficient to show that the activities of the county and the home builders and all similarly situated parties will affect the number of Flies, but one must also show that their actions will affect the number of species. Extinction, in other words, affects interstate commerce, but the loss of an individual Fly does not. The precarious survival of the Fly suggests that such a fate might quickly ensue from the loss of one or more Flies, but the Court has indi-

83. See National Assn. of Home Builders v. Babbitt, 130 F.3d 1041, 1046 (D.C. Cir. 1997) (Wald, J.) (describing the class to be aggregated as "all similarly situated endangered species"); U.S. Brief, supra note 28, at 27 (asserting that "[t]he appropriate analytical framework aggregates the effects of all conduct within the class of activities regulated by the challenged statutory provision"). It is conceivable that Judge Wald meant to refer to a narrower class limited to "similarly situated" endangered species, but she offered no indication of what qualified a species as "similarly situated" to the Fly.

84. See National Assn. of Home Builders, 130 F.3d at 1049 n.7 (Wald, J.).

85. See National Assn. of Home Builders, 130 F.3d at 1052 n.10 (Wald, J.) (writing that "[a]ctivities that threaten a species' existence threaten to reduce biodiversity and thereby have a substantial negative effect on interstate commerce. Thus, the biodiversity rationale offered here provides support for the Endangered Species Act only insofar as the Act prevents activities that are likely to cause the elimination of species."). Note that according to the government, the opponents of the Fly "appear to concede that if the restrictions of the [ESA] are lifted, the Fly will become extinct." U.S. Brief, supra note 28, at 35 n.17.
cated a decided reluctance to add any inferences beyond those already made in *Wickard*.

The disagreement between Judge Wald and Judge Sentelle about whether the protection of the Fly’s habitat depends upon the interstate effect of endangered species or of the Fly captures but two of the possible levels of aggregation. Consider the different categories that Congress could adopt in an effort to protect the Fly: (1) *An individual Delhi Sands Flower-Loving Fly* — Congress could decide to protect one individual, and presumably very special, Fly. That Congress would take this step for an insect that is visible for only two weeks is doubtful, but it is more plausible that another animal might receive such consideration. Certain individual animals, like Hsing-Hsing, the panda at the National Zoo, are objects of particular attention apart from their species. (2) *A specific population of the Fly* — Congress could act to protect one colony of Flies without extending that protection to other colonies. In fact, the ESA extends its protections to specific populations of wildlife and fish species that are endangered even if other populations of the species are thriving, but insects are not eligible for such treatment.

(3) *The Fly* — Congress could pass the Delhi Sands Flower-Loving Fly Act, protecting the survival of the Fly and only the Fly. Obviously, such a statute has not yet joined the U.S. Code, but analogous statutes already exist. Congress enacted a Bald Eagle Protection Act to provide special protection to that one species.

(4) *All flies* — The next largest aggregation would protect all species of flies. This legislation could either protect every fly species from extinction, or more broadly, it could protect all flies from

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86. The final paragraph of the Court’s decision in *Lopez* explains that a decision upholding the challenged statute would require the Court to pile inference upon inference in a manner that would bid fair to convert congressional authority under the Commerce Clause to a general police power of the sort retained by the States. Admittedly, some of our prior cases have taken long steps down that road, giving great deference to congressional action. . . . The broad language in these opinions has suggested the possibility of additional expansion, but we decline here to proceed any further.

United States v. *Lopez*, 514 U.S. 549, 567 (1995) (citations omitted). *Wickard* was one of the “prior cases” referred to by the Court, see *Lopez*, 514 U.S. at 556; indeed, the Court described *Wickard* as “perhaps the most far reaching example of Commerce Clause authority over intrastate activity.” *Lopez*, 514 U.S. at 560.


88. See Bald Eagle Protection Act, ch. 278, § 1, 54 Stat. 250 (1940) (current version at 16 U.S.C. § 668 (1985)).
harmful activities whether or not the survival of the species is in doubt. Again, Congress has amended the Bald Eagle Protection Act to extend coverage to several species of eagles.89 (5) All insects — Congress could legislate to protect not only flies, but beetles, bees, and grasshoppers as well. The Marine Mammal Protection Act is the most analogous existing statute.90 (6) All wildlife — Congress could act to save mammals, birds, reptiles, insects and all other wildlife. The ESA does more — the statute also protects plants — but it also does less — the ESA's protections only apply if a species has been listed as endangered or threatened. (7) All living things — Here the statute would cover wildlife, plants, and also viruses and microorganisms. The ESA does not reach this far. (8) All natural objects — Congress could pass an Earth Preservation Act that would add rocks, canyons, water, air, and other inanimate natural objects to the list of protected resources. There is no analogous federal or state law.

The question raised by the Fly case is whether a statute based on a broader aggregation can constitutionally be applied to a narrow category that lacks the required substantial relationship to interstate commerce. The Court has not confronted that question. Indeed, the Court has said little about how far Congress can reach in aggregating activities or how one decides what aggregations are permissible.91 The few available clues counsel against overly broad aggregations. Lopez rejects any Commerce Clause test that every conceivable federal statute could satisfy.92 The Court's frequently stated concern about federalism pushes toward less sweeping aggregations.93 And lower courts have rejected the contention that Con-


91. Much to the chagrin of constitutional law scholars. See, e.g., Gerald Gunther & Kathleen M. Sullivan, Constitutional Law 191 (13th ed. 1997) (wondering about the permissible scope of the aggregation theory employed in Wickard); Stone et al., supra note 26, at 226 (asking what kinds of aggregation are allowed by Wickard).

92. See supra text accompanying note 14; see also United States v. Lopez, 514 U.S. 549, 600 (1995) (Thomas, J., concurring) (insisting that "[t]he aggregation principle is clever, but has no stopping point"); Paul Brest & Sanford Levinson, Processes of Constitutional Decisionmaking: Cases and Materials 385 (3d ed. 1992) (asking if Wickard's aggregation principle "leave[s] anything to the requirement that an activity have a substantial effect on interstate commerce"); Merritt, supra note 15, at 749 (contending that "blindly transferring the aggregation principle from Wickard to other contexts distorts the meaning of Wickard and suggests that the decision is much broader than it was intended").

93. See, e.g., Printz v. United States, 117 S. Ct. 2365, 2377-78 n.11 (1997) (describing federalism as "the unique contribution of the Framers to political science and political theory") (quoting Lopez, 514 U.S. at 575 (1995) (Kennedy, J., concurring)). The Court, however, has yet to rely on the teachings of federalism to guide its Commerce Clause aggregation deci-
gress can satisfy the Commerce Clause simply by choosing a broad
category of activities whose aggregate effect on interstate com­
merce is substantial.94 In that light, the congressional findings
about the effects of endangered species generally do not preclude a
Commerce Clause objection to the use of the takings provision to
regulate the Fly's habitat, or the habitat of any other species with
minimal connections to interstate commerce.

Suppose, for example, that Congress wanted to protect Hsing­
Hsing, the panda in the National Zoo, and that it enacted two sta­
tutes to achieve that end. The Hsing-Hsing Preservation Act, which
makes it illegal to harm Hsing-Hsing, could be supported by find­
ings that people come from around the country to visit the pandas
in the National Zoo. The Earth Preservation Act, which makes it
illegal to damage or interfere with any of the natural objects of the
earth, could be defended by findings recording the substantial effect
that water, geological formations, animals, and other natural ob­
jects have on interstate commerce. Either law could be constitu­
tionally applied to a poacher who shot Hsing-Hsing in the National
Zoo; the panda's connection to interstate commerce is manifest.
Obviously, though, the Earth Preservation Act would cover a host
of other activities. It could, for example, be applied to a Minnesota
company that discharged toxic pollutants into the Mississippi River
to the detriment of businesses and residents in numerous states
downstream. The more difficult Commerce Clause case would in­
volve the application of the Earth Preservation Act to an activity
that itself lacked a substantial relationship to interstate commerce,
say a woman who mowed her lawn, thereby damaging a natural
object of the earth. Absent any relationship between the particular
natural object — her lawn — and interstate commerce, that appli­
cation would seem to fall beyond the scope of the Commerce
Clause.95 If so, then absent any relationship between the Fly and
interstate commerce, the fact that other endangered species are

94. See United States v. Bird, 124 F.3d 667, 676 (5th Cir. 1997) (rejecting the govern­
ment's claim that "Congress need only identify a broad 'class of activities' and determine
that, viewed in the aggregate, the class 'substantially affects' interstate commerce," and insis­
ting instead that something relevant must connect the separate incidents and their effects on
interstate commerce), cert. denied, 118 S. Ct. 1189 (1998); United States v. Lopez, 2 F.3d
1342, 1367 (5th Cir. 1993) (contending that a "limiting principle must apply to the 'class of
activities' rule, else the reach of the Commerce Clause would be unlimited, for virtually all
legislation is 'class based' in some sense of the term"), affd., 514 U.S. 549 (1995).

95. The other possibility is that Congress could focus on the interstate connections of the
lawnmower instead of the lawn. See infra text accompanying notes 139-44.
substantially related to interstate commerce would not be enough to justify the regulation of the Fly and its habitat.

The biodiversity argument advanced by Judge Wald and Judge Henderson suffers from the same flaw. It is no doubt true, as they claim, that the loss of any species will diminish the number of resources available for interstate commerce. It is also true, though, that any action that harms the earth could diminish the resources available for interstate commerce. The biodiversity argument comes close to saying that because the earth is necessary for interstate commerce, anything that adversely affects the earth can be regulated by Congress. Indeed, any action that harms anything can be said to affect interstate commerce because it is hard to imagine anything that could not serve as a resource used in interstate commerce. Such a loss of resources argument proceeds from the same premises that would justify the application of the Earth Preservation Act to any human activity. It would, in short, allow Congress to do anything.

That is not to say that a regulated party can escape the Commerce Clause by placing itself in a narrow category that includes only activities that do not affect interstate commerce. That ploy has not worked. But suppose that Congress itself were to choose a narrow category. If Congress passed a Delhi Sands Flower-Loving Fly Act that specifically sought to preserve the habitat of the Fly, and only the Fly, then the aggregation principle would not save that statute. Assuming that any congressional findings accompanying a statute directed at the Fly would discuss that species instead of endangered species in general, the case for linking the Fly to interstate commerce fails. But if Congress lacks the power to protect the Fly's habitat by enacting a statute specifically designed to achieve that goal, the case for allowing the ESA to be applied to the Fly's habitat would result in Congress being able to accomplish through a broad statute what it could not do with a narrow one. Something is

96. See supra text accompanying notes 58-60.
97. See, e.g., United States v. Hicks, 106 F.3d 187, 190 (7th Cir. 1997) (Posner, J.) (rejecting a narrow aggregation under the federal arson statute because "[c]ategorize finely enough and the interstate effects evaporate and the statute is nullified"), cert. denied, 117 S. Ct. 2425 (1997); Proyect v. United States, 101 F.3d 11, 14 (2d Cir. 1996) (refusing to characterize the appropriate category as the cultivation of marijuana without the intent to distribute because "[a]ny class of economic activities could be defined so narrowly as to cover only those activities that do not have a substantial impact on interstate commerce"); United States v. Pozsgai, 999 F.2d 719, 734 (3d Cir. 1993) (contending that Wickard does not require "a showing of local or regional aggregation," and thus evaluating the cumulative effects of filling wetlands across the country).
98. The case would succeed if the biodiversity argument was available, but there are difficulties confronting that argument. See supra text accompanying note 96.
odd about conditioning the Commerce Clause power to accomplish a certain goal on Congress legislating far more broadly than necessary.

Odd or not, a prominent strand in Commerce Clause jurisprudence leads toward that result. Judge Wald defended her focus on endangered species generally as sufficient to justify the regulation of the Fly's habitat by quoting part of the Court's admonition that "where a general regulatory scheme bears a substantial relation to commerce, the de minimis character of individual instances arising under the statute is of no consequence." Or as the Court put it when it upheld the application of the federal loansharking statute to a local extortionist in *Perez v. United States*, if a statute regulates a "class of activities . . . within the reach of the federal power, the courts have no power 'to excise as trivial, individual instances' of the class." Both statements recognize that Congress is not only empowered to regulate interstate commerce, but also to enact statutes that are necessary and proper to effectuate that power. The ESA establishes a general regulatory scheme that is related to commerce, so the intrastate and noncommercial nature of the Fly (and other species) could be irrelevant.

The reading of both statements needed to make the particular characteristics of the Fly irrelevant raises a number of problems. Both statements depend upon the same broad reading of the activities that can be aggregated under *Wickard* described above. Both statements first appeared in *Maryland v. Wirtz* in a context that casts doubt upon a broad reading of *Wickard*. *Wirtz* sustained the extension of the Fair Labor Standards Act — originally upheld in the classic New Deal case of *United States v. Darby* — to employees of any enterprise engaged in interstate commerce. Justice Douglas feared that the enterprise concept could allow Congress to "devour the essentials of state sovereignty." But the Court assured him that that was a misreading of *Wickard*:

Neither here nor in *Wickard* had the Court declared that Congress may use a relatively trivial impact on commerce as an excuse for broad general regulation of state or private activities. The Court has

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100. 402 U.S. 146 (1971).
102. See supra text accompanying notes 58-60.
104. 312 U.S. 100 (1941).
only said that where a general regulatory statute bears a substantial relation to interstate commerce, the *de minimis* character of individual instances arising under that statute is of no consequence.\(^\text{106}\)

Actually, that is not too reassuring. It virtually invites Congress to legislate as broadly as possible: a statute will fall if the trivial impacts dominate the substantial impacts, but a statute will survive if the substantial impacts dominate the trivial ones. In other words, if Congress gathers enough substantial impacts into the covered class, the trivial impacts can be regulated, too. Even so, it is not obvious that the substantial impacts associated with the ESA’s takings provision prevail over the trivial impacts. The parties to the Fly case agreed that the constitutionality of the application of the statute to the Fly would decide the constitutionality of the statute as applied to other intrastate species, yet fully half of the listed species live in only one state.\(^\text{107}\)

The contention that Congress can regulate trivial and *de minimis* activities that are unrelated to interstate commerce sheds some light on an unexplained phenomenon: the absence of successful *as-applied* challenges in Commerce Clause cases. Most constitutional litigation is divided into facial challenges to an entire statute and individual challenges to particular applications of the statute, with the failure of a facial challenge in no way precluding a subsequent *as-applied* challenge. Not so in Commerce Clause cases. Courts often say that they are considering the constitutionality of a particular application of a statute under the Commerce Clause — the Fly case itself is an example\(^\text{108}\) — but the fact that trivial instances and *de minimis* applications are nonetheless within the scope of congressional power invariably dooms such challenges. The Court decides the constitutionality of legislation under the

\(^{106}\) *Wirtz*, 392 U.S. at 196 n.27.

\(^{107}\) *See* Envtl. Brief, *supra* note 52, at 1 (contending that the case “is about all of the more than 500 species that occur in only a single state, for the if the Constitution prevents the federal government from extending meaningful protection to the Delhi Sands flower-loving fly, then it almost certainly prevents that same government from extending such protection to the others”); U.S. Brief, *supra* note 28, at 1 (describing the issue presented in the case as “[w]hether Congress has power under the Commerce Clause to prevent the extinction of species by prohibiting takings of species listed as endangered, even where a particular species lives entirely within one State”); NAHB Brief, *supra* note 62, at 17 (indicating that the municipalities and developers “challenge[d] the authority of the federal government to regulate the use of non-federal lands in order to protect a species of Fly that is found only in California”).

Commerce Clause on an all-or-nothing basis. But it does not say why.

Even so, the de minimis applications and trivial instances language does not allow Congress to regulate anything so long as the substantial effects of an activity on interstate commerce are greater than the trivial effects. Consider the meaning of the necessary and proper clause in this context. Justice Black once wrote that “it has long been held that the Necessary and Proper Clause . . . adds to the commerce power of Congress the power to regulate local instrumentalities operating within a single State if their activities burden the flow of commerce among the States.”109 So stated, the Necessary and Proper Clause explains the substantial effects test — the third prong of Lopez — but it still requires a showing that the regulated activity affects interstate commerce when aggregated with similar activities. The activities must still be similar, so the aggregation question still remains. A broad reading of what is necessary and proper would justify, for example, the regulation of any activity affecting any natural object pursuant to the Earth Preservation Act hypothesized above. It thus violates the Lopez command that a permissible Commerce Clause test cannot allow Congress to regulate everything.

What, then, do the de minimis and trivial instances statements mean? The best explanation appears in Judge Baldock’s opinion sustaining an application of the Hobbs Act: “if a statute regulates an activity which, through repetition, in aggregate has a substantial affect on interstate commerce . . . ‘the de minimis character of individual instances arising under the statute is of no consequence.’”110 This reading clarifies that the de minimis principle attaches only after the threshold determination has been made that the aggregated effects on the activity on interstate commerce are substantial. That requires the appropriate level of aggregation to be decided first, and if the effects of the activity once aggregated are substantial, the fact that a particular case involves an instance that does not itself affect interstate commerce does not push that instance outside the scope of congressional power. Again, as Judge Baldock explains, Lopez does not “require the government to show that individual instances of the regulated activity substantially affect commerce.”111 Thus the fact that one individual Delhi Sands

111. Bolton, 68 F.3d at 399.
Flower-Loving Fly, or grizzly bear, or bald eagle is not related to interstate commerce does not limit the scope of the ESA's takings provision so long as the individual is part of a group whose aggregate effect on interstate commerce is substantial.

That approach reconciles the Lopez insistence on a Commerce Clause test that does not justify every federal statute with the Lopez acceptance of the de minimis application principle. But the Supreme Court has never stated this view, and it is not the only possible reading of the contested statements. Judge Wald's broader approach to aggregation and her reading of the de minimis principle draws some support from cases in other contexts that decline to inquire about the specific regulated activity so long as a general federal statute imposes the regulation. CERCLA, for example, imposes liability on parties who were involved in the disposal of hazardous wastes. Most courts to consider commerce challenges to the statute have inquired about the relationship between the improper disposal of hazardous wastes and interstate commerce. The only court of appeals to consider the issue relied upon a narrower category — the disposal of hazardous waste at the site of production — though the court found it unnecessary to actually decide the appropriate category. No court has demanded proof of the relationship between the particular hazardous waste disposed by the defendant and interstate commerce, nor has any court taken the additional step of requiring a connection between a particular kind of hazardous waste — such as PCBs, zinc, lead, arsenic — and interstate commerce. Similarly, many civil rights statutes aggregate the effects of discrimination based on race, sex, age, and other biases without any suggestion that a narrower category — say, only race discrimination — is appropriate for Commerce Clause purposes.

That does not mean that all endangered species can be treated alike, though. Each type of discrimination exists in each state; there is no intrastate type of discrimination paralleling the existence of endangered species that live in only one state. Nor is there anything special about each specific hazardous substance, whereas the reason for protecting endangered species is that each species is unique. We may not be concerned if a deer gets killed because


113. See United States v. Olin Corp., 107 F.3d 1506, 1510 & n.8 (11th Cir. 1997).
there are plenty of other deer, but if a Fly — or worse, a bald eagle — gets killed, we worry because that could lead to the extinction of the species. It is the loss of a species and its effect on biodiversity that concerns us more than the loss of an individual animal, plant, or insect.

In sum, the effort to employ the aggregation principle to use the effects of endangered species generally on interstate commerce to justify the regulation of the Fly's habitat fails because that kind of aggregation would justify any federal legislation. *Lopez* teaches that such a result is impermissible. The narrowest view of aggregation is misplaced, too, because it would demand a showing of a relationship to interstate commerce in every individual case. That is the equivalent of requiring each federal statute to contain a jurisdictional statement, but *Lopez* did not go so far as to hold that such a jurisdictional statement is the only way to comply with the limits of the Commerce Clause. The correct answer lies somewhere in the middle, between aggregating everything and aggregating nothing, with Congress given deference to choose what activities to combine — provided it explains why.

**B. The Potential Effect Problem**

Even if we do not receive any benefit from the Fly now, it is possible that in the future the Fly could become valuable to human society and exert a substantial effect on interstate commerce.\(^{114}\) Congress was well aware of "the unknown uses that endangered species might have and about the unforeseeable place such creatures may have in the chain of life on this planet."\(^{115}\) The stories of other species that were once thought worthless but which later yielded valuable medicinal, nutritional and other services counsel humility before one dismisses the potential benefits of the Fly. But the potential effect argument will always be available because anything is possible. It was conceivable that the possession of guns near a school could have a dramatic effect on interstate commerce, yet that speculative possibility was not enough to persuade the

\(^{114}\) It is also possible that the Fly is already related to interstate commerce, but our limited understanding of natural processes prevents us from realizing that fact. That is the essence of Judge Wald's ecosystem argument: every species, including the Fly, has an actual effect on interstate commerce because every species is crucial to its ecosystem. That argument differs from the one discussed in this section because here I consider potential effects of the Fly that do not yet exist.

Court that the Commerce Clause justified the statute in *Lopez*. Indeed, the scenario described in *Lopez* sounds more likely than the potential dire consequences of the loss of the Fly. So the potential effect argument must overcome the twin obstacles of transgressing the *Lopez* prohibition on a Commerce Clause test that justifies any federal statute and rendering *Lopez* itself wrongly decided.

Most lower courts have not let those details stand in their way, especially in environmental cases.116 This trend may be changing in light of the recent invalidation of the regulation extending the jurisdiction of the Clean Water Act to wetlands that “could” be involved in interstate commerce.117 Judge Sentelle was even more skeptical of relying upon anything short of an actual and ongoing effect on interstate commerce in the Fly case. He reasoned that because the Fly is not interstate, and the Fly is not commerce, the Fly cannot be interstate commerce.118 But that argument proves far too much. The very fact that a species has become endangered maximizes the likelihood that the species lives in only one state and that there is no commerce in the species. Indeed, almost half of the species protected by the ESA survive in only one state.119 Hawaii has the most endangered species,120 and is the state that is least likely to witness the travel of such species across state lines. The plants that are protected by the ESA are limited in their ability to move across state lines. And while some endangered species possess tremendous value in the black market as they become rarer,


117. *See United States v. Wilson*, 133 F.3d 251, 257 (4th Cir. 1997); *see also United States v. McHenry*, 97 F.3d 125, 132–33 (6th Cir. 1996) (Batchelder, J., dissenting) (concluding that the fact that “many things, and for that matter, most people, ‘retain the inherent potential to affect commerce’ . . . . cannot suffice to give Congress the power to regulate or protect them”).

118. *See National Assn. of Home Builders*, 130 F.3d at 1061 (Sentelle, J., dissenting) (insisting that “the chances of validly regulating something which is neither commerce nor interstate under the heading of the interstate commerce power must . . . be an empty recitation”).


the same scarcity reduces the amount of commerce that can actually occur in a species. In short, if the constitutionality of protecting an endangered species requires that the species be widespread and familiar to consumers, maybe our constitutional jurisprudence has achieved terminal silliness after all.121

The dilemma, therefore, is to avoid either a Commerce Clause test that empowers Congress to regulate any potential effects or a test that denies Congress power unless an activity is currently involved in interstate commerce. Preseault v. Interstate Commerce Commission122 suggests a solution. In Preseault, the Court rejected a Commerce Clause challenge to the National Trail System Act Amendments of 1983, which Congress enacted to preserve railroad rights-of-way that are not currently in service. The Court held that the statute was permissible under the Commerce Clause because it was "reasonably adapted to the goal of encouraging the development of additional recreational trails."123 Further, the Court held that Congress could protect the rights-of-way for future railroad use because "Congress apparently believed that every line is a potentially valuable national asset that merits preservation even if no future rail use for it is currently foreseeable."124 Thus the government and the environmentalists in the Fly case relied on Preseault for the proposition that the protection of potential future value in interstate commerce is within Congress's authority under the Commerce Clause.125

A potential effect on interstate commerce moves a step beyond an actual effect on interstate commerce, and the Court might not be willing to take that step. It becomes more attractive, though, as the likelihood that the effect will actually materialize increases. The statute in Preseault relied upon a future effect that, while not currently foreseeable, was predicated on the occurrence of the identical effect before. The protected land had been used for railroads in

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123. Preseault, 494 U.S. at 18; see also 494 U.S. at 18 (describing the congressional intent "to preserve established railroad rights-of-way for future reactivation of rail service, to protect rail transportation corridors, and to encourage energy efficient transportation use" as "valid congressional objectives") (quoting H.R. REP. No. 98-28, at 8 (1983) and S. REP. No. 98-1, at 9 (1983)).
the past, and the continued existence of the rights-of-way supported the probability that the land would be used that way again. Such knowledge of a past effect on interstate commerce distinguishes Preseault, and a Commerce Clause test fashioned upon it, from a general willingness to allow Congress to enact any legislation based on speculation that an effect on interstate commerce will occur at some point in the future.

This approach will produce mixed results for the ESA’s takings provision. For species that were once involved in interstate commerce, the probability of a future effect is high if the ESA achieves its goal of eliminating the threat to the species. Eagles fall in this category, as do alligators and gray whales. For species like the Fly that were never involved in interstate commerce, the probability of a future effect is much lower and depends upon the discovery of a value that heretofore has been hidden. There are probably more of the latter kind of species than the former. The ability to regulate those species that have never affected interstate commerce necessitates either a broad aggregation principle such as that questioned above, or a broad reading of the ability of Congress to regulate future, yet substantial, effects.

Thus Congress should be able to use its Commerce Clause power to regulate some but not all future substantial effects on interstate commerce. Insisting upon a sufficient likelihood that the expected substantial effect will actually occur avoids the Lopez fear of allowing Congress to do anything in the name of what might happen someday. Congressional findings take on an added importance in this context as a way of demonstrating to the Court that even though the requisite effect has yet to occur, there is good reason to believe that it will. With no such reason for anticipating that the Fly will have such an effect on interstate commerce, the future effect must come instead from the lessons of endangered species generally, which requires the invocation of the aggregation principle. But that principle cannot be stretched to protect the Fly.

126. See United States v. Bramble, 103 F.3d 1475, 1481 (9th Cir. 1996) (upholding the Eagle Protection Act because “extinction of the eagle would substantially affect interstate commerce by foreclosing any possibility of several types of commercial activity”); United States v. Lundquist, 932 F. Supp. 1237, 1244 (D. Or. 1996) (sustaining federal protection of eagles because eagle parts have been involved in interstate commerce).

127. See U.S. Brief, supra note 28, at 20 n.9.
C. The Choice of Activity Problem

Though they reached different conclusions, Judge Sentelle and Judge Wald both concentrated on the relationship between the object of congressional protection — endangered species — and interstate commerce. Judge Henderson, by contrast, focused on the activities that threatened to doom the Fly. The difference is stark. If the connection between the hospital and interstate commerce is sufficient, then most of Judge Wald’s opinion was unnecessary, and most of Judge Sentelle’s dissent was misdirected.

The appeal of this approach grows when it is compared to the actual strictures of the ESA. The challenged provision of the statute, as interpreted by the Fish & Wildlife Service, forbids any action that substantially interferes with the habitat of an endangered species. Building a hospital on top of one of the few remaining homes of the Fly falls within that provision, as does building a residential subdivision in the same place. San Bernardino and the home builders desire to engage in activities that the ESA’s takings provision prohibits. Their activities, moreover, would substantially affect interstate commerce. The analysis is exceptionally straightforward, but it indicates that Judge Henderson was right.

Further proof comes from the Court’s decisions upholding statutes that prohibit the use of the channels of interstate commerce for purposes that Congress deems immoral. Congress has enacted statutes prohibiting the transportation of numerous people and things across state lines for immoral purposes, and the Court has sustained them all.\textsuperscript{128} In each instance, the statute is motivated by a desire to protect someone or something that is affected by commerce, rather than something that affects commerce itself. The ESA’s takings provision operates in the same manner. For many, the extinction of a species is an immoral act that should be excluded from interstate commerce to the extent possible. Bans on the sale of an endangered species are the most obvious way of keeping rare animals and plants out of interstate commerce, but they are not the only way. The takings provision serves the same purpose to the extent that it applies to activities — like the construction of a hospital or a subdi-

\textsuperscript{128}. See, e.g., Gooch v. United States, 297 U.S. 124 (1936) (applying a federal kidnapping statute); Hoke v. United States, 227 U.S. 308 (1913) (upholding the White Slave Traffic Act’s prohibition on taking a woman across state lines for immoral purposes); Champion v. Ames (The Lottery Case), 188 U.S. 321 (1903) (upholding a federal anti-lottery statute); see also GUNThER & SULLIVAN, supra note 91, at 195 (noting that “the ‘end’ which is invoked in [Darby] to justify the local ‘means’ is the relationship of the local sanction to the ban on interstate shipments (not the relationship between the regulated local activity and a national commercial problem)”).
vision — that rely upon materials and workers involved in interstate commerce. Recall that the ESA’s takings provision states that it is illegal “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” The prohibition refers to those who engage in the harmful conduct, not to the protected species themselves. It regulates activities like building a hospital in the Fly’s habitat; it does not regulate the Fly itself. As far as the law is concerned, the Fly is free to do whatever it wants.

The takings provision reveals the ambiguity in the definition of the “activity” that substantially affects interstate commerce. This choice of activities problem necessitates an often unconscious decision to focus on a statute’s means or a statute’s ends for purposes of measuring the relationship of the activity to interstate commerce. Consider the challenges to the Freedom of Access to Clinic Entrances Act (FACE), the statute enacted by Congress in 1994 in response to protests at abortion clinics. FACE criminalizes a variety of threatening activities that impede access to or intentionally damage abortion clinics. The statute has been challenged on Commerce Clause grounds, albeit unsuccessfully, by protesters whose conduct has ranged from peaceful to violent. When looking for the requisite connection to interstate commerce, most courts have emphasized the ways in which the clinics are related to interstate commerce. Only occasionally has a court considered the relationship between the protesters and interstate commerce.

In this context, FACE stands on stronger ground if the relevant activity is defined by reference to the ends of the statute rather than

132. See Wilson, 73 F.3d at 692 (Coffey, J., dissenting) (arguing that “the regulation applies to the activity of the demonstrators, not to the activity of the clinic itself”); United States v. Wilson, 880 F. Supp. 621, 630 n.16 (E.D. Wis. 1995) (asserting that “FACE does not regulate abortion clinics, it regulates abortion protests”), rev’d, 73 F.3d 675 (7th Cir. 1995); see also Terry, 101 F.3d at 1417 (declining to address whether FACE regulates protests instead of abortion clinics). Judge Wald characterized the activity at issue in the FACE cases as “intra-state, noncommercial protest activity.” National Assn. of Home Builders v. Babbitt, 130 F.3d 1041, 1049 (D.C. Cir. 1997).
its means. It is easier to make the link between abortion clinics and interstate commerce than to make the link between abortion protesters and interstate commerce.\textsuperscript{133} This is the opposite of the ESA, where the means of the statute — prohibiting habitat destruction — are more closely related to interstate commerce than the end of protecting endangered species, however local the species may be. In other words, FACE protects a typically interstate activity by regulating typically intrastate actors, while the ESA protects typically intrastate creatures by regulating typically interstate activity.

The FACE cases could suggest that the activity that must be substantially related to interstate commerce is defined by the ends of the statute, rather than its means. If that were so, then the appropriate question under the ESA is whether an endangered species has a substantial effect on interstate commerce, so Judge Henderson’s focus would be wrong. But either the means or the ends should be able to provide the requisite connection to interstate commerce. Surely the fact that a species is sold in stores across the country serves to justify congressional regulation of that species. That being so, the fact that an interstate activity threatens an intrastate species suffices under the Commerce Clause too. If, for example, Congress enacted a statute providing that “the construction of any facility with a substantial relationship to interstate commerce shall be illegal if such construction threatens the habitat of an endangered species,” that would seem to fall squarely within the third line of cases listed in \textit{Lopez} (and perhaps the other two lines of cases as well).\textsuperscript{134} The application of the ESA to the construction of a hospital or a housing development in the Fly’s habitat is indistinguishable from that hypothetical statute.

San Bernardino County loses on this view because of the substantial relationship of the hospital to interstate commerce. That effect also means that Congress has the power to regulate all of the hospital’s activities, ranging from environmental to employment to health concerns, so long as Congress acts consistently with other constitutional provisions. A theory that empowers Congress to adopt such all encompassing regulation will surely offend some, but

\textsuperscript{133} The point is relative: some abortion protesters have a substantial relationship to interstate commerce themselves, but many more abortion clinics have a much stronger relationship.

\textsuperscript{134} See \textit{United States v. Lopez}, 514 U.S. 549, 558-59 (1995) (stating that “Congress' commerce authority includes the power to regulate those activities having a substantial relationship to interstate commerce, \textit{i.e.}, those activities that substantially affect interstate commerce” (citations omitted)).
the specter of such sweeping federal regulation would come as no surprise to any hospital administrator. The housing construction, electrical substation, traffic intersection and similar activities proposed by the NAHB and the other opponents of the Fly would likewise fall within the scope of the Commerce Clause.

That does not mean that Congress can prohibit all of the activities that threaten the Fly's habitat. Judge Henderson and Judge Wald both emphasized that their theories allowed federal regulation only where it was interstate commerce that threatened an endangered species. Takings of endangered species habitat that do not result from such interstate commercial activities lie beyond Congress's power. Three of the threats to the Fly's habitat illustrate the kinds of issues this distinction raises. The Fly suffers from (1) the recreational use of off-road vehicles (ORVs) that crush the Fly's habitat and interfere with its breeding, (2) the presence of non-native plants that alter the ecological balance upon which the Fly depends, and (3) the trampling of land — or Flies themselves — by people walking in the area. These activities raise difficult Commerce Clause questions even under the theory that allows Congress to regulate the hospital and other construction within the Fly's habitat.

The hardest case for Congress to regulate would involve children walking barefoot across the Fly's habitat on their way to school. *Lopez* holds that any relationship to the school is inadequate to support Commerce Clause jurisdiction, and the children themselves offer no alternative justification for federal legislation. Transplanting a mustard plant from one's garden into the Fly's

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135. See National Assn. of Home Builders, 130 F.3d at 1048 (Wald, J.) (finding the takings provision within congressional authority in cases “where the pressures of interstate commerce place the existence of the species in peril”); 130 F.3d at 1059 (Henderson, J., concurring) (noting that the takings provision “here acts to regulate commercial development of the land inhabited by the endangered species”); 130 F.3d at 1060 n.6 (Henderson, J., concurring) (explaining that “[t]he rationale on which I rely permits regulation only of activities (including land use) that adversely affect species that affect, or are involved in, interstate commerce”). Note that while the latter statement in Judge Henderson's opinion is ambiguous, the context shows that she must mean that the activities, not the species, “affect, or are involved in, interstate commerce.”

136. See FWS Fly Listing Decision, supra note 2, at 49,884; Fly Draft Recovery Plan, supra note 2, at 13-14 (detailing these threats to the Fly); see also FWS Fly Listing Decision, supra note 2, at 49,881 (advising that all of the five remaining populations of the Fly “are threatened by urban development activities”).

137. See *Lopez*, 514 U.S. at 563-66 (rejecting the government's argument that possession of a firearm in a local school zone substantially affects interstate commerce).
habitat presents a similarly problematic case.\textsuperscript{138} If the Commerce Clause reaches such activities, then it reaches anything.

It is not much easier to reach the ORV users, other trampling activities, and other ways of introducing non-native plants. Presumably, the ORV users enjoy their vehicles within the borders of California, and it is even more likely that anyone walking through the Fly's habitat will stay within the state. Thus the only way that Congress could reach such activity would be to regulate based on the interstate movement of the equipment itself. Most ORV manufacturers are located outside of California, so Congress could attempt to regulate the use of ORV's in endangered species habitat in the same way that Congress regulates a hospital because of its interstate connections. But that principle could be stretched to the point at which Congress could regulate anything. Children who trample the Fly's habitat on their way to school would seem to be the quintessential local activity outside the scope of the Commerce Clause, but one can imagine Congress trying to reach even that activity based on the out-of-state manufacturer of the children's Nike shoes — and the shoes quite literally would be the instruments of the habitat's destruction.\textsuperscript{139} The same theory would hold that planting a 49¢ packet of mustard seeds bought at a local hardware store but produced out-of-state is within the scope of the Commerce Clause.

These cases take the Commerce Clause a step beyond the regulation of the hospital, the traffic intersections, and the construction of the residential subdivisions. Interstate commerce plays an ongoing role in each of those cases: doctors and patients and suppliers travel to the hospital once it is operating, cars on interstate trips use the roads, and the construction of residential homes involves materials and workers from outside of California. Likewise, the hotel and restaurant at issue in the Civil Rights Act cases relied upon out-of-state guests and food, respectively, on a continuing basis. The ORV users, children wearing Nike shoes, and gardeners planting seeds are different. The interstate connection in each of those cases has ceased. To allow Congress to regulate those activities anyway would, in Professor Gunther's words, drain the substantive content

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\item \textsuperscript{138} See \textit{FLY DRAFT RECOVERY PLAN}, supra note 2, at 13 (noting that non-native plants such as mustard, Russian thistle, horehound, cheeseweed and many species of introduced grasses severely degrade the Fly's habitat because they affect the soil and available moisture).
\item \textsuperscript{139} Cf. Deborah Jones Merritt, \textit{The Fuzzy Logic of Federalism}, 46 Case W. Res. L. Rev. 685, 686 (1996) (speculating about whether the Commerce Clause allows Congress to regulate someone wearing moccasins in their own home).
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of the Commerce Clause "beyond any point yet reached."\(^{140}\) It nears, and may transgress, the *Lopez* command against a test that allows Congress to regulate anything.

The ORV users, trampling children, and gardeners demonstrate the difficulty of drawing a clear line between what is substantially affected by interstate commerce and what is not. I do not offer such a line here. I do have an answer, though, albeit one based on another notoriously vague concept: proximate cause. Professor Merritt has argued that these kinds of determinations should be made according to traditional proximate cause principles.\(^{141}\) A substantial effect exists where "the relationship between the regulated activity and interstate commerce [is] strong enough or close enough to justify federal intervention."\(^{142}\) Such a proximate cause test explains why Congress cannot rely on the Nike shoes worn by a school child to regulate the child's trampling of the Fly's habitat. In tort law, proximate cause principles would prevent Nike from being held liable if a child kicked and injured a classmate, even if the child was wearing Air Jordans at the time. So, too, the step from the child's actions to the provenance of the shoes would be beyond the reach of Congress under a proximate cause test for the Commerce Clause. Such a proximate cause determination is particularly suited for the ESA's takings provision because the substantive reach of the statute is already influenced by notions of proximate cause.\(^{143}\)

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140. BREST & LEVINSON, supra note 92, at 399 (quoting a June 5, 1963 letter from Gerald Gunther to the Department of Justice regarding the proposed Civil Rights Act which stated that "the substantive content of the commerce clause would have to be drained beyond any point yet reached to justify the simplistic argument that all interstate activity may be subjected to any kind of national regulation merely because some formal crossing of an interstate boundary once took place, without regard to the relationship between the aim of the regulation and interstate trade"). The inadequacy of these kinds of relationships is further illustrated by the cases where the connection to interstate commerce did not even satisfy the minimal requirements of a statute containing a jurisdictional statement. See, e.g., United States v. Denalli, 73 F.3d 328, 330-31 (11th Cir. 1996) (holding that delivering memos printed on a home computer to colleagues at work did not provide a sufficient nexus to interstate commerce); United States v. Pappadopoulos, 64 F.3d 522, 526-27 (9th Cir. 1995) (holding that the provision of natural gas from out-of-state did not place a residential home within the scope of the Commerce Clause).

141. See Merritt, supra note 139, at 691-92; Merritt, supra note 15, at 678-82; see also United States v. Hicks, 106 F.3d 187, 189 (7th Cir. 1997) (Posner, J.) (commenting that the Commerce Clause argument rejected in United States v. *Lopez* would require "a pretty elongated and speculative chain of causation, which if accepted might allow Congress to regulate any activity at all").

142. Merritt, supra note 15, at 679; see also id. at 681 (indicating that "some measure of the directness of the effect on interstate commerce" is part of this test and that a host of factors are relevant in determining whether the requisite proximity exists). A proximate cause test would thus avoid comparisons of Commerce Clause jurisprudence to the six degrees of Kevin Bacon game. See Linehan, supra note 17, at 382 & n.107.

The idea has broader significance, though, because it offers a means by which activities affected by interstate commerce can be separated from those that are not. That separation, in turn, answers Judge Sentelle's concern that allowing Congress to regulate activities affected by interstate commerce, instead of those that affect interstate commerce, places everything within the scope of the Commerce Clause.144

III. Conclusion

The Fly is a relative latecomer to our nation's debate over Congress's commerce power. It raises new questions, though, that transcend the traditional disputes about the meaning of commerce and the amount of effect needed to invoke congressional authority. Those questions do not necessarily lend themselves to answers that justify the ESA's protection of the Fly. Judge Wald's need to rely upon a broad aggregation principle and the potential effects of the Fly reveals the inability of the Court's existing precedents to readily encompass the Fly. If Lopez was serious about rejecting any understanding of the Commerce Clause that would justify any federal action, then the focus of Judge Wald's opinion may not save the Fly. Judge Henderson suffers from no such problem. The hospital is engaged in interstate commerce, the hospital could wipe out the Fly, so the hospital may be subjected to the regulation of the BSA. By contrast, activities that lack a substantial relationship to interstate commerce lie outside the scope of the Commerce Clause no matter how damaging they are to the Fly.

Even if Judge Sentelle's analysis prevails and the Supreme Court holds in a future case that the Commerce Clause does not authorize the application of the ESA to the habitat of species that are located in only one state, that would not doom federal efforts to protect endangered species. The takings provision might be defensible under the treaty power or under the Property Clause.145 Alternately, the ESA bans trade in endangered species, which even

144. See National Assn. of Home Builders v. Babbitt, 130 F.3d 1041, 1063 (D.C. Cir. 1997) (Sentelle, J., dissenting) (contending that the focus on things that affect the Fly's habitat "improperly inverts the third prong of Lopez and extends it without limit").

Judge Sentelle concedes is justified by the Commerce Clause.\footnote{146 See 16 U.S.C. § 1538(a), (d)-(f) (1994); see also National Assn. of Home Builders, 130 F.3d at 1063 n.1 (Sentelle, J., dissenting) (noting that “Congress may have the authority to prevent interstate transportation of flies,” and “prohibiting the local possession and exchange of flies might arguably be necessary to preventing interstate transportation or exchange of flies”).} The ESA also authorizes the federal government to purchase the habitat of endangered species to be managed for the preservation of the species.\footnote{147 See 16 U.S.C. § 1534. See generally Bradley C. Karkkainen, Biodiversity and Land, 83 CORNELL L. REV. 1, 82 (1997) (arguing that “federal ownership, not regulation of private land uses, should be the centerpiece of our national biodiversity conservation strategy”).} The purchase of endangered species habitat avoids the Commerce Clause controversies and the allegations that the takings provision works a constitutional taking of private property requiring just compensation to the landowner. Also, most states have acted to protect the endangered species in their midst, and private organizations such as the Nature Conservancy spend millions of dollars each year acquiring endangered species habitat so that they can preserve it. The Fish & Wildlife Service has also employed public education campaigns to persuade private individuals to protect endangered species like the Fly.\footnote{148 See FLY DRAFT RECOVERY PLAN, supra note 2, at 35 (proposing a public outreach effort to teach people about “the unique and vanishing ecosystem that the Delhi sands flower-loving fly represents”).} But as worthy as these efforts have been, Congress remains unpersuaded that they can replace the protective function served by the ESA’s takings provision.

So the Commerce Clause fights will continue. The questions are different now, but the underlying debates about the meaning of our federal system remain the same. What we do not yet know is whether the understanding of federalism that produced \textit{Lopez} and other recent decisions will be the understanding that influences the answers to those questions. For that we must wait because the Court declined to meet the Fly.