



July 6, 2026

VIA Federal eRulemaking Portal

Samuel D. Rauch, III
Deputy Assistant Administrator for Regulatory Programs
National Marine Fisheries Service
Attn: NOAA-NMFS-2026-1222

Re: Comments of the American Petroleum Institute, EnerGeo Alliance, Offshore Operators Committee, National Ocean Industries Association, and Louisiana Mid-Continent Oil and Gas Association on NMFS's Initiation of a Status Review for the Rice's Whale and Request for Information, 91 Fed. Reg. 24,205 (May 5, 2026)

Dear Mr. Rauch:

The American Petroleum Institute ("API"), EnerGeo Alliance ("EnerGeo"), Offshore Operators Committee ("OOC"), National Ocean Industries Association ("NOIA"), and Louisiana Mid-Continent Oil and Gas Association ("LMOGA") submit this letter and attachments in response to the National Marine Fisheries Service's ("NMFS") notice that it is initiating a status review for the Rice's whale and seeks information from the public for that review, pursuant to the Endangered Species Act ("ESA"). 91 Fed. Reg. 24,205 (May 5, 2026). NMFS specifically requests "any such information on the Rice's whale that has become available since the last status review was conducted in 2016." *Id.*

The decision to list a population of animals as a threatened or endangered species under the ESA has significant regulatory consequences. Congress was aware of those consequences and thus required listings to be made "solely on the basis of the best scientific and commercial data available." 16 U.S.C. § 1533(b)(1)(A). The "obvious purpose" of this requirement "is to ensure that the ESA not be implemented haphazardly, on the basis of speculation or surmise" and "to avoid needless economic dislocation produced by agency officials zealously but unintelligently pursuing their environmental objectives." *Bennett v. Spear*, 520 U.S. 154, 176-77 (1997).

The ESA also requires listing decisions to follow a transparent public process. 16 U.S.C. § 1533(b). The threshold inquiry in any listing decision is whether an identified population of animals meets the ESA's definition of "species," which includes "subspecies." The decision as to

whether a population of animals qualifies as a “species” for purposes of the ESA is ultimately a regulatory determination. *Id.* § 1533(a)(1) (“The Secretary shall by regulation promulgated in accordance with subsection (b) determine whether any species is an endangered species or a threatened species.”).

NMFS’s decisions to list the Gulf of America population of the Bryde’s whale as a separate subspecies in 2019, and then as a separate species (the Rice’s whale) in 2021, did not follow the required regulatory process. As set forth in detail below, NMFS scientists—outside of *any* regulatory process—developed new standards for what constitutes a “species” and a “subspecies” that expansively allow for the creation of countless new species and subspecies based on miniscule, and in some cases completely unobservable or unverified, distinctions. The Rice’s whale listing depended on those standards because live Rice’s whales cannot be visually distinguished from Bryde’s whales. NMFS then outsourced the decision as to whether the Gulf of America Bryde’s whale population was a separate “subspecies” or “species” under those new standards to unidentified members of a “Committee” of a non-profit organization—the Society for Marine Mammalogy. NMFS portrayed this Committee as an “independent” scientific body without disclosing that the Committee was in fact chaired at all relevant times by NMFS scientists—indeed, some of the same NMFS scientists who established the new, non-regulatory “species” and “subspecies” standards. This was hardly “Gold Standard Science,” as required by Executive Order No. 14303, 90 Fed. Reg. 22,601 (May 23, 2025), and most definitely was not the transparent regulatory process mandated by the ESA.

This is not the first time an agency improperly listed a species based on erroneous taxonomy. The most egregious example occurred early in the history of the ESA, when the U.S. Fish and Wildlife Service listed the so-called “snail darter” as an endangered species in response to a petition claiming that this fish was unique and existed in only one location in the Little Tennessee River, which just happened to be below the proposed Tellico Dam. The dam was opposed by environmental activists, who leveraged the ESA listing of the “snail darter” to obtain a court-ordered injunction preventing construction of the dam. *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 161 (1978) (“*TVA v. Hill*”). That turned out to be a farce, and the very premise of the listing was subsequently proven false.

Immediately after the *TVA v. Hill* decision, Congress acted, in 1978, to amend the statute by, among other things, requiring agencies to base ESA decisions on the best available data rather than speculating or applying a conservation bias when faced with uncertainty. By 1980, populations of the so-called “snail darter” were identified in many different locations. 87 Fed. Reg. 60,298, 60,300 (Oct. 5, 2022). And a recent study confirmed that the snail darter listing was a taxonomic error. The so-called “snail darter” was simply a population of the very common stargazing darter. Ava Ghezelayagh et al., *Comparative Species Delimitation of a Biological Conservation Icon*, 35 Curr. Biol. 398 (2025), <https://doi.org/10.1016/j.cub.2024.11.053>.

The erroneous creation of the “snail darter” taxa occurred because “early researchers ‘squinted their eyes a bit’ when describing the fish, because it represented a way to fight the Tennessee Valley Authority’s plan to build the Tellico Dam.” Jason Nark, *This Tiny Fish’s Mistaken Identity Halted a Dam’s Construction*, N.Y. Times (Jan. 3, 2025), <https://www.nytimes.com/2025/01/03/science/snail-darter-fish-tellico-dam.html> (quoting Dr.

Thomas Near, curator of ichthyology at the Yale Peabody Museum). The “snail darter” thus became the ““first and probably the most famous example of ... the “conservation species concept,” where people are going to decide a species should be distinct because it will have a downstream conservation implication.”” *Id.* (quoting Dr. Near).

The listing of the Rice’s whale was similarly driven solely by a “conservation species concept,” not the legal standards and process required by the ESA. This letter provides the following information, summarized here and explained in detail below, for consideration in the status review process:

- In 2024, the U.S. Supreme Court eliminated deference to agencies in their interpretation of statutes. *Loper Bright Enters. v. Raimondo*, 603 U.S. 369, 400 (2024). In so doing, the Court held that every statutory provision has “a single, best meaning” and that “meaning is fixed at the time of enactment.” *Id.* (internal quotation marks and citation omitted). Pursuant to that holding, NMFS has an obligation to revisit the Rice’s whale listing decision to confirm whether the Rice’s whale meets the definition of a “species” according to the single best meaning of that term when it was amended in 1978.
- The single best meaning of the term “species” in 1978 embraced the “biological species concept.” Under that concept, a “species” consists of a population of animals in reproductive isolation that demonstrate consistent morphological differences across multiple characters, often both structural and functional. The Rice’s whale does not meet this definition of “species,” as explained in R.W. Davis, *Rice’s Whale: Considerations for Identifying Cetacean Species*, 42 Mar. Mammal Sci. (2026), <https://doi.org/10.1111/mms.70112> (“Davis (2026)”).
- The statutory definition of “species” includes “subspecies.” The single best meaning of the term “subspecies” in 1978 was a population of animals within a species that demonstrates small but persistent morphological variations that are different than other populations within the same species. The Rice’s whale also does not meet this definition. “There is no apparent morphological difference between the Bryde’s whale in the Gulf of Mexico and those worldwide.” 81 Fed. Reg. 88,639, 88,641 (Dec. 8, 2016); 84 Fed. Reg. 15,446, 15,471 (Apr. 15, 2019).
- The statutory definition of “species” includes “distinct population segment.” 16 U.S.C. § 1532(16). The single best meaning of the term “distinct population segment” in 1978 was a vertebrate population or group of populations that is both geographically discrete from other populations of the species and uniquely important or significant to the species as a whole. The Rice’s whale does not meet this definition either. The population of whales in the Gulf of America represents only a small portion of the range of the Bryde’s whale, and there is presently insufficient information to demonstrate the population is discrete from other populations or is otherwise significant to the Bryde’s whale species.
- The decisions to list the Gulf of America population of the Bryde’s whale as a “subspecies” and then as a “species” were not based on sound or objective science. Rather, the decisions were the end-product of a mission pursued by a small group of

NMFS scientists with a conservation agenda. The process was marred by an extreme lack of transparency and undisclosed conflicts of interest. *See* Protect the Public's Trust, *Request for Correction Under the Information Quality Act* (May 6, 2026), <https://protectpublictrust.org/wp-content/uploads/2026/05/Request-for-Correction-Under-the-Information-Quality-Act.pdf> ("PPT 2026"). The process and decisions were concentrated in the hand of a single NMFS scientist, Dr. Patricia E. Rosel. As explained by Protect the Public's Trust: "In this case the same individual was the lead author of the paper being validated, a senior editor of the journal that published it, and the chair of the professional committee whose acceptance NMFS treated as the regulatory trigger for the species reclassification." *Id.* at 19-20.

- The listing was further marred by the fact that NMFS scientists produced a collection of papers in 2017 with the express purpose of redefining the evidentiary standards for establishing a "species" or "subspecies," including a paper by Dr. Rosel creating a "subspecies" standard that did not require diagnostic morphological differentiation and permitted recognition based solely on mitochondrial DNA ("mtDNA"). The public was not involved in that process. Dr. Rosel's new "subspecies" standard was then applied in 2019, when NMFS determined the Gulf of America Bryde's whale population to be a "subspecies" based solely on mtDNA. The new 2017 standards for "species" and "subspecies" followed no public or regulatory process and were entirely inconsistent with the meanings of "species" and "subspecies" intended by Congress when it enacted the terms in 1978.
- Since the 2016 status review, additional evidence continues to undermine the Rice's whale listing decision, including recent evidence suggesting that (i) the population may be larger than previously estimated, (ii) the geographic range of the population is broader than previously recognized, and (iii) the magnitude of the threats posed by human activity may be lower than previously estimated.

I. THE ASSOCIATIONS

API is a national trade association representing approximately 600 member companies involved in all aspects of the oil and natural gas industry. API's members include producers, refiners, suppliers, pipeline operators, and marine transporters, as well as service and supply companies that support all segments of the industry. API's members are directly engaged in oil and gas exploration in the Gulf of America and have for decades been among the principal developers of offshore leases in the Gulf of America.

EnerGeo is the international trade association representing the industry that provides geophysical services (geophysical data acquisition, processing and interpretation, geophysical information ownership and licensing, and associated services and product providers) to the oil and natural gas industry. EnerGeo has existed for 50 years and is the only global trade organization solely dedicated to the geophysical and exploration industry. EnerGeo and its members have longstanding and fundamental interests in the conduct and regulation of geological and geophysical exploration activities, particularly in the Gulf of America. EnerGeo's

members conduct geophysical studies and analyze data that are essential to the discovery and delivery of oil and natural gas resources in the Gulf of America.

For more than 50 years, the NOIA has represented the interests of all segments of the offshore energy industry, including offshore oil and gas, offshore wind, offshore carbon sequestration, and offshore minerals. NOIA's membership includes energy project operators, leaseholders, and developers along with the entire supply chain of companies that make up an innovative ecosystem contributing to the safe and responsible exploration, development, and production of U.S. energy and mineral resources.

OOC member companies represent more than 90 percent of the energy produced on the Gulf of America Outer Continental Shelf ("OCS"). OOC's membership includes all OCS region leaseholders as well as critical service companies that contribute to responsible offshore energy development of all forms. OCS energy offers a significant competitive advantage as one of the most efficient sources of conventional energy in the world, with a carbon intensity 46 percent lower than the global average outside the United States and Canada.

Founded in 1923, LMOGA is Louisiana's longest standing trade association, exclusively representing all sectors of the oil and gas industry in Louisiana and across the Gulf of America including exploration, production, mid-stream activities, pipeline, refining, and marketing.

II. BACKGROUND

This section provides a chronology of the primary events relevant to the Rice's whale listing decisions by NMFS and scientists working for NMFS.

1. In 2004, a group of marine mammal scientists, including representatives from NMFS's Southwest and Southeast Fisheries Science Centers, held a workshop (the "Workshop") on the "Shortcomings of Cetacean Taxonomy in Relation to Needs of Conservation and Management." See Nat'l Marine Fisheries Serv., NOAA-TM-NMFS-SWFSC 363, Report of the Workshop (Randall R. Reeves et al., eds. 2004), <https://repository.library.noaa.gov/view/noaa/3474> ("Reeves (2004)"). The Workshop scientists set "conservation priorities" that included identifying more taxonomic groups for existing marine mammals because "non-scientists may need to be persuaded that a group of organisms is something more than 'just' a population." *Id.* at 28. The Workshop scientists provided the example of how a taxonomic change to the "so-called Maui's dolphin" as a new "subspecies" gave that dolphin population "new standing as a *cause célèbre* [sic]" by making it the "world's rarest marine dolphin." *Id.* The Workshop scientists identified a key limitation on creating new taxonomic groups: "the fact that for most cetaceans, we do not have enough morphological data to meet an evidentiary standard for establishing (or rejecting) additional species." *Id.* at 4.

2. To address those data limitations, the Workshop scientists created new standards for species and subspecies taxonomy that do not rely on the standard biological species concept on which the ESA's definition is based. Instead, Workshop attendees decided that a "species" should be proven by "at least two independent lines of evidence" and that "[m]ultiple lines of evidence are essential, and what ultimately matters is that a convincing argument is provided

demonstrating irreversible divergence.” *Id.* at 5. For a “subspecies,” the Workshop concluded that “for taxonomy at the subspecies level to be relevant for conservation, the range of evidence that can be used needs to be broadened to include genetic markers.” *Id.* at 7. So, the Workshop attendees broadened their definition for “subspecies” to include “*organisms that appear to have been on independent evolutionary trajectories . . . as demonstrated by morphological evidence or at least one line of appropriate genetic evidence.*” *Id.* The Workshop clarified that “appropriate genetic evidence” did *not* include mtDNA because “there is some danger that dependence upon mtDNA alone could make female philopatry the sole basis for distinguishing subspecies, a practice that could lead to rampant splitting below the species level.” *Id.* Dr. Rosel participated in the Workshop. *Id.* at 21.

3. In July 2014, Dr. Rosel published a paper examining the mtDNA of Bryde’s whales in the Gulf of America. Patricia E. Rosel & Lynsey A. Wilcox, *Genetic Evidence Reveals a Unique Lineage of Bryde’s Whales in the Northern Gulf of Mexico*, 25 *Endanger. Species Res.* 19 (2014), <https://www.int-res.com/articles/esr2014/25/n025p019.pdf> (“Rosel and Wilcox (2014)”). The study did not conclude that the Gulf of America population was a “species” or “subspecies” under the standards established in the Workshop. The paper concludes only that the population “may also warrant species or subspecies status” and remarks that “[i]f such elevation were warranted, it could make the [Gulf of America population of Bryde’s] whales one of the most endangered of the baleen whales.” *Id.* at 32. In a subsequent paper published in 2021, Dr. Rosel conceded that Rosel and Wilcox (2014) “did not provide a species description,” in part because “criteria for recognizing species and subspecies of cetaceans based on mtDNA sequence data were also lacking at the time.”¹

4. On September 18, 2014, the Natural Resources Defense Council (“NRDC”) filed a petition requesting that NMFS list the Gulf of America’s Bryde’s whale population under the ESA. The petition argued that the population constituted a “distinct population segment” under the ESA. The petition relied principally on the mtDNA analysis presented in Rosel and Wilcox (2014).

5. In response to NRDC’s listing petition, NMFS promptly initiated a status review and established a Status Review Team (led by Dr. Rosel), which produced a Status Review Report in 2016. *See* Patricia E. Rosel et al., NOAA Technical Memorandum NMFS-SEFSC-692, *Status Review of Bryde’s Whales (Balaenoptera edeni) in the Gulf of Mexico Under the Endangered Species Act* (2016), <https://repository.library.noaa.gov/view/noaa/14180> (“Rosel (2016)” or “2016 Status Report”).

6. Rosel (2016) did not address the standards for “species” or “subspecies” established in the Workshop (Reeves (2004)), nor did it provide a definition of “species” or “subspecies.” Instead, the Status Review Team asked the Society for Marine Mammalogy’s (“SMM”) Committee on Taxonomy (the “SMM Committee” or “Committee”) for its opinion:

¹ Patricia E. Rosel et al., *A New Species of Baleen Whale (Balaenoptera) from the Gulf of Mexico, with a Review of Its Geographic Distribution*, 37 *Mar. Mammal Sci.* 577 (2021), <https://doi.org/10.1111/mms.12776> (“Rosel (2021)”).

“Are Bryde’s whales in the Gulf of Mexico likely to belong to at least an undescribed subspecies of what is currently recognized as *Balaenoptera edeni*?” See Rosel (2016) at Appendix 1.

7. To answer this question, the Status Review Team presented the SMM Committee with a three-page summary of Rosel and Wilcox (2014). *See id.* The Status Review Team did not provide a definition of subspecies to the Committee. The Committee is not a government agency. Its proceedings are not open to the public. The SMM Committee’s response (*see id.*) consisted of a single-paragraph email from the Committee Chair, Dr. William F. Perrin, as follows:

The attached was circulated to the members of the Committee on Taxonomy of the Society for Marine Mammalogy. Nine members responded (of 15); all voted it “highly likely” that the Gulf of Mexico Bryde’s whales comprise at least an undescribed subspecies. This result constitutes the opinion of the Committee, which decides its position on such issues based on majority vote.

Id. at 123. Rosel (2016) does not disclose who served on the SMM Committee, which members voted on this issue, or what standards those members applied in determining that this population of animals constituted “at least an undescribed subspecies.” The Committee Chair, Dr. Perrin, worked for NMFS’s Southwest Fisheries Science Center. A few months after this vote, and before the completion of the 2016 Status Report, Dr. Rosel (a member of the SMM Committee) became the Committee’s Chair. *See* PPT 2026 at n.93.

8. Based on this majority-vote “opinion” by the SMM Committee, Rosel (2016) concluded that the Gulf of America population of Bryde’s whale was a separate subspecies: “The Team concurred with the Committee’s conclusion and therefore conducted this status review at the level of subspecies.” Rosel (2016) at iii. The status review was completed in December 2016.

9. On December 8, 2016, immediately after completion of the status review, NMFS published a “finding” under the ESA that “we have determined that the Gulf of Mexico Bryde’s whale is taxonomically a subspecies of the Bryde’s whale thus meeting the ESA’s definition of a species.” 81 Fed. Reg. 88,639 (Dec. 8, 2016). The basis for that finding was Rosel (2016) and “the Committee’s determination.” *Id.* at 88,641. NMFS did not articulate standards for “species” or “subspecies” as part of that finding. NMFS’s findings also concede that “[t]here is no apparent morphological difference between the Bryde’s whale in the Gulf of Mexico and those worldwide.” *Id.*

10. The SMM also publishes the journal *Marine Mammal Science*. In 2017, the journal published a “Special Issue” comprising six articles, predominately written by NMFS scientists, on the topic of using mtDNA to classify marine mammal taxonomy at the subspecies level. These articles were marked as “U.S. Government work” by the journal. The articles purport to “define the concepts of populations, subspecies, and species” and “*quantitative standards* (the magnitude of differentiation expected at different taxonomic levels) for using genetic data to support taxonomic recognition.” Barbara L. Taylor et al., *Why We Should Develop Guidelines and Quantitative Standards for Using Genetic Data to Delimit Subspecies for Data-Poor Organisms Like Cetaceans*, 33 *Marine Mammal Sci.* (Special Issue) 12 (2017),

<https://doi.org/10.1111/mms.12413> (“Taylor (2017a)”). Dr. Rosel was the lead author on two of the articles and co-author on three of the other four articles.

11. In Taylor (2017a), published by SMM, NMFS’s scientists explain that “species” and “subspecies” designations of marine mammals are important because of regulatory consequences: “Named taxonomic units, particularly when they occur entirely within the waters of single nations, are almost certain to be accorded a higher management priority than groups of individuals that are regarded simply as part of a widely distributed taxon.” *Id.* at 14. Taylor (2017a) further explains that these new definitions are “particularly applicable to data-poor groups because it allows for naming a subspecies when there is uncertainty about whether lineages have diverged sufficiently for species-level recognition. This allows a species that lacks convincing data for lineage divergence to be recognized as a subspecies while sufficient data are accrued, which could take decades for some cetaceans.” *Id.* at 13–14.

12. Taylor (2017a) defines “species” as follows: “A species is a separately evolving lineage composed of a population or collection of populations.” *Id.* at 17. It defines “subspecies” as follows: “A *subspecies* is a population, or collection of populations, that *appears to be* a separately evolving lineage with discontinuities resulting from geography, ecological specialization, or other forces that restrict gene flow to the point that the population or collection of populations is diagnosably distinct.” *Id.* (emphases in original). The use of the word “appears” was intended to “captur[e] within the definition several different types of uncertainty encountered by practitioners.” Barbara L. Taylor et al., *Guidelines and Quantitative Standards to Improve Consistency in Cetacean Subspecies and Species Delimitation Relying on Molecular Genetic Data*, 33 Mar. Mammal Sci. (Special Issue) 135 (June 2017), <https://doi.org/10.1111/mms.12411> (“Taylor (2017b)”).

13. On April 15, 2019, NMFS issued its final decision listing the Gulf of America Bryde’s whale population as an endangered subspecies. *See* 84 Fed. Reg. 15,446 (Apr. 15, 2019). The listing decision continued to rely on NMFS’s 2016 finding that the population was a subspecies. The listing decision confirmed that “[t]here is no apparent morphological difference between the Bryde’s whale in the Gulf of Mexico and those worldwide.” *Id.* at 15,471.

14. In 2021, Dr. Rosel published another paper in SMM’s *Marine Mammal Science*, in which she concluded that the population of Bryde’s whales in the Gulf of America is actually a “new species” of whale. Rosel (2021). At the time of publication, Dr. Rosel was the Deputy Editor of *Marine Mammal Science*. *See* PPT 2026 at 3.

15. Rosel (2021) relied on the “new guidelines and thresholds for delimiting cetacean subspecies and species using mtDNA control region sequence data” that were created in the 2017 Special Issue of SMM’s *Marine Mammal Science* by Dr. Rosel, Dr. Taylor, and others, and “re-examine[d]” the findings of Rosel (2014) “in light of the guidelines and thresholds provided” in that Special Issue. Rosel (2021) at 7. Rosel (2021) also evaluated the skull of a single adult Gulf of America Bryde’s whale that stranded in Florida (USNM 594665) that had been buried for several years, and compared it with a photograph of a skull of one Bryde’s whale (CKU HL19990729) recovered from an undisclosed location and a description of some Bryde’s whale

skulls by other researchers.² Rosel observed small differences in the shape of the nasal bones in the Florida whale as compared to a Bryde's whale sample (CKU HL19990729). The specimen that became the holotype (USNM 594665) was partially decomposed when it was retrieved in the Florida Keys. Given ocean circulation patterns in that area, it is difficult to say with certainty where the animal came from. Based on the mtDNA data and the minor morphological difference observed in a single adult skull from the Gulf of America, which can only be differentiated through skull necropsy and is not distinguishable through visual observation alone, Rosel (2021) concludes that this population is a previously unnamed "species," called the "Rice's whale."

16. Following the publication of Rosel (2021), and based on that publication, the SMM Committee identified the Rice's whale as a new species. Dr. Rosel was still the Chair of the SMM Committee at that time.

17. On August 23, 2021, NMFS listed the new "Rice's whale" as an endangered "species" without any public process. 86 Fed. Reg. 47,022 (Aug. 23, 2021). NMFS "announce[d] the revised taxonomy" of the "Bryde's whale—Gulf of Mexico subspecies" as the "Rice's whale" to "reflect the scientifically accepted taxonomy and nomenclature of this species." *Id.* In so doing, NMFS amended its list of endangered species at 50 C.F.R. § 224.101(h) to officially make the "Rice's whale" an "endangered species." The sole bases for this decision were the Rosel (2021) paper and "independent acceptance by the Society for Marine Mammalogy Committee on Taxonomy" (chaired by Dr. Rosel). *Id.* at 47,023.

18. NMFS supported its August 2021 listing of the Rice's whale by citing the Workshop (Reeves (2004)) for the proposition that "a single line of evidence (*e.g.*, genetic data or morphological data) was sufficient to delimit cetacean subspecies while two independent lines of evidence were necessary for delimiting species." *Id.* However, NMFS's decision did not disclose Reeves (2004)'s warning that mtDNA was not "appropriate" genetic data for making species determinations. Reeves (2004) at 7. Nor did the listing decision include the Reeves (2004) admonition that a species needed to be proven by "*at least two* independent lines of evidence" and that "[m]ultiple lines of evidence are essential, and what ultimately matters is that a convincing argument is provided demonstrating irreversible divergence." *Id.* at 4-5.

III. COMMENTS

A. NMFS's Review of the Rice's Whale Listing Decision Must Apply Definitions of "Species" and "Subspecies" That Comply with the ESA.

In 2016, NMFS concluded that the population of Bryde's whales in the Gulf of America constituted a "subspecies" and, in 2021, that this population was a separate "species." However, in neither of those decisions did NMFS specify definitions for "species" or "subspecies." NMFS is required to revisit those statutory terms and their application to the Rice's whale as part of the current status review.

² Rosel (2021) also evaluated a juvenile skull from a whale stranded in North Carolina but does not address whether its developmental stage affects the reliability of its use as a comparator.

1. Under *Loper Bright*, NMFS must determine the single best interpretation of “species” and “subspecies” under the ESA at the time it was enacted.

In 2024, the U.S. Supreme Court eliminated agency deference to interpretation of statutes. *Loper Bright*, 603 U.S. at 400. Instead, every statutory provision has “a single, best meaning” and that “meaning is fixed at the time of enactment.” *Id.* (internal quotation marks and citation omitted). Pursuant to that holding, NMFS must confirm whether the Rice’s whale is a “species” according to the single best meaning of that term, as used in the ESA in 1978, when the ESA’s current definition of “species” was added.

The ESA provides that the term “species” “includes any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.” 16 U.S.C. § 1532(16). When Congress enacted this definition, it deviated from most other terms defined in the ESA by using the signal “includes,” rather than “means.” *See id.* § 1532. While the “species” definition offers examples of what may fall within this classification, it does not delineate the term’s outer boundaries, and Congress’s use of an “includes” signal leaves the definition “more susceptible to extension of meaning.” *Burgess v. United States*, 553 U.S. 124, 131 n.3 (2008). This framework creates ambiguity regarding Congress’s intended meaning of “species,” compounded by the fact that the two critical categories at the heart of the definition—“subspecies” and “distinct population segment”—are themselves undefined under the ESA.

Resolving these ambiguities and determining the single, best meaning of “species,” “subspecies,” and “distinct population segment” requires applying traditional tools of statutory interpretation. *Loper Bright*, 603 U.S. at 400-01; *Bostock v. Clayton County*, 590 U.S. 644, 674-75 (2020). Statutory interpretation begins with the language of the statute, giving effect to every clause and word of a statute whenever possible. *Loughrin v. United States*, 573 U.S. 351, 358 (2014); *Duncan v. Walker*, 533 U.S. 167, 172 (2001). Courts should presume Congress intentionally included or omitted language in specific sections of a statute, particularly when the omission or inclusion of words would render the statute superfluous. *Loughrin*, 573 U.S. at 358.

“A fundamental canon of statutory construction is that, unless otherwise defined, words will be interpreted as taking their ordinary, contemporary, common meaning . . . at the time Congress enacted the statute.” *Perrin v. United States*, 444 U.S. 37, 42 (1979). Indeed, even where a term has a statutory definition, the definition itself can create ambiguity, in which case “it is not unusual to consider the ordinary meaning of a defined term.” *Bond v. United States*, 572 U.S. 844, 861 (2014). Moreover, where Congress employs “technical words or terms of art,” it is “proper to explain them by reference to the art or science to which they (are) appropriate.” *Corning Glass Works v. Brennan*, 417 U.S. 188, 201 (1974) (citation omitted). Finally, although legislative history can never displace unambiguous text, it remains useful in determining a term’s contemporaneous meaning. Because a statutory term may change meanings over time, historical sources and legislative history shedding light on the “understandings of the law’s drafters” can be useful evidence. *Bostock*, 590 U.S. at 674-75.

2. In 1978, a “species” taxonomic determination required persistent and significant morphological differences.

The single best meaning of “species” under the ESA is a population of animals in reproductive isolation with consistent morphological differences across multiple characters, often both structural and functional. This understanding comports with the term’s ordinary meaning in the 1970s, but more importantly tracks the “biological species concept” that prevailed among taxonomists when Congress enacted and amended the ESA. *See Species, Webster’s Dictionary* (2d ed. 1978) (defining “species” as “a single, distinct kind of plant or animal, having certain distinguishing characteristics”); Davis (2026) at 4-5 (describing the biological species concept as discussed by prominent taxonomy publications in the 1940s-60s); B.N. Singh, *Biological Species Concept: The Most Widely Accepted Concept of Species*, 69 J. Sci. Res. of The Banaras Hindu Univ. 25 (2025), <https://doi.org/10.37398/JSR.2025.690204>.

Under the biological species concept, the most commonly relied upon evidence of speciation is the degree of morphological differences between populations. George G. Simpson, *Principles of Animal Taxonomy* 150-51 (1961) (“Simpson (1961)”); Ernst Mayr, *Systematics and the Origin of Species* 120-21 (1942) (“Mayr (1942)”); Ernst Mayr, *Principles of Systematic Zoology* 29, 194 (1969) (“Mayr (1969)”). Taxonomists found the degree of morphological differences between populations was a strong indicator of biological distinctness and reproductive gaps, such that *consistent, observable characters* shared between populations conveyed a high probability that the populations were (or recently had been) interbreeding and therefore belong to the same species. *See* Mayr (1942) at 120–21; Simpson (1961) at 150-51.

While the biological species concept acknowledged the importance of genetic diversity, it emphasized the manifestation of gene *effects* on taxonomically important characters with meaningful evolutionary significance. *See* Mayr (1942) at 71-73; George G. Simpson, *The Species Concept*, 5 *Evolution* 285 (1951) (“Simpson (1951)”); Mayr (1969) at 28-29. Thus, taxonomists emphasized morphology and other aspects of the phenotype *produced by* genotype discontinuity, using evidence of the amount and kind of morphological differences to support an inference of reproductive isolation. Mayr (1969) at 29. In this way, taxonomists classified species based on consistent observable characters indicative of true evolutionary divergence and adaptive differentiation by focusing on the amount and kind of morphological differences. *Id.*; Simpson (1951) at 286; Mayr (1942) at 287. Taxonomists recognized the inherent genetic diversity in every individual, population, and species, such that “variation and mutation alone do not necessarily produce new species.” Mayr (1942) at 154. Instead, a new species required “robust and reproducible morphological and functional distinctions indicative of true evolutionary divergence and adaptive differentiation, rather than merely superficial or isolated variations.” Davis (2026) at 5 (citing Mayr (1969); Simpson (1951)).

The ESA’s legislative history reveals congressional intent paralleling the predominant concerns of the taxonomy community at the time. Congress was similarly concerned with distinctions drawn based on reproductive isolation, initially defining “species” in 1973 to include parameters for the inclusion of smaller taxa only where they “interbreed when mature.” *See* Pub. L. No. 93-205 § 3(11), 87 Stat. 884 (1973). During the 1978 ESA amendments, congressional commentary advocated for the preservation of the gene pool and diversity as critical links in the

biological chain of evolution but cautioned against attempting to achieve absolute preservation for minute variations. *See* Cong. Rsch. Serv., *A Legislative History of the Endangered Species Act of 1973, as Amended in 1976, 1977, 1978, 1979, and 1980*, at 891, 978, 1143 (1982) (“ESA Legislative History”). Congressional comments also emphasized the need for sound biological information when determining the scope of species protection, with some expressing concern that the ESA was not intended to function as the “Endangered Variation-of-a-Species Act.” *Id.* at 881, 923. Though not conclusive, these comments—particularly in context of the ordinary and taxonomic meaning of “species” at the time—suggest that Congress intended the scope of “species” to focus on biologically significant manifestations of evolution.

3. A “subspecies” taxonomic determination in 1978 required persistent morphological difference from other populations of the same species.

The single best meaning of “subspecies” as that term was understood in 1978 was a population within a species that exhibits small, but persistent, morphological variations from other populations of the same species. This meaning comports with the ordinary meaning of “subspecies” as that term was defined in the 1970s, the scientific understanding of the term by the taxonomy community at the time, and the congressional history underlying the ESA.

In 1970, “subspecies” was commonly understood to mean “any natural subdivision of a species that exhibits small, but persistent, morphological variations from other subdivisions of the same species living in different geographical regions.” *Subspecies, Webster’s Dictionary* (2d ed. 1970). The underpinnings of this ordinary meaning of “subspecies” paralleled the taxonomy community’s understanding of “subspecies” at the time: “an aggregate of phenotypically similar populations of a species, inhabiting a geographic subdivision of the range of a species, and differing taxonomically from other populations of the species.” Mayr (1969) at 41. Like the term’s ordinary meaning, this scientific understanding of “subspecies” emphasized observable phenotypic and taxonomic differences, cautioning that subspecies should only be named “if they differ ‘taxonomically,’ that is, by sufficient diagnostic morphological characters.” *Id.* at 42.

The most widely adopted method of delineating subspecies was the so-called 75 percent rule, wherein subspecies status requires that 75 percent of the individuals comprising a population must be morphologically distinct from all (99+ percent) of the individuals of all other populations of the same species with overlapping variable characters. *See id.* at 190; Dean Amadon, *The Seventy-Five Percent Rule for Subspecies*, 51 *Condor* 250, 252 (1949) (“Amadon (1949)”). This statistical method of identifying subspecies ensures that “at least a minimum proportion, [] usually set at 75 per cent, of individuals of adjacent subspecies will be unequivocally determinable,” with “markedly significant differences in mean characters.” Simpson (1961) at 173-75. The 75 percent rule acknowledged that a subspecies designation would not be useful if the subspecies was defined based on distinctions “too slight to permit satisfactory separation of the populations in question from adjacent subspecies.” Amadon (1949) at 250. In this way, the 75 percent rule permitted taxonomists to determine whether the “difference between two populations is sufficiently great to justify their recognition as two different subspecies.” Mayr (1969) at 188.

4. A “distinct population segment” is a discrete and biologically important portion of the larger species.

The single best meaning of “distinct population segment” is a vertebrate population or group of populations that is both geographically discrete from other populations of the species and uniquely important or significant to the species as a whole. Unlike “subspecies,” the term “distinct population segment” was not an established taxonomic term in 1978. Accordingly, the meaning of this term can be understood from both the words used and the context and structure of the ESA.

In 1978, the term “population” meant “the assemblage of plants or animals living in a given area” and “all the individuals of one species in a given area.” *Population*, *Random House Dictionary of the English Language* (1973) (“Random House (1973)”). In taxonomic circles, a “population” was commonly understood to mean a group of individual organisms of the same species that live in the same geographic area and have the capability of interbreeding. *See* Mayr (1969) at 31 (“A population, as defined in evolutionary biology, is an interbreeding group.”); Simpson (1961) at 73-74 (“[A] population is a group of organisms that live or have lived together in space and in time.”). A species may have multiple populations or only one. *See* Simpson (1961) at 150 (“Species are groups of actually or potentially interbreeding natural populations, which are reproductively isolated from other such groups.”). Predominant taxonomic practice at the time recognized that “[p]opulations, not individuals, are the units of systematics and are the things classified” and that “[a]ll populations vary, and the variation is an essential part of their nature and their definition.” *Id.* at 65. The term “distinct” commonly meant “distinguished as not being the same; not identical; separate” and “different in nature or quality” and “unusual; rare; notable.” *Random House* (1973). And the term “segment” commonly meant “one of the parts into which something naturally separates or is divided; a division, portion, or section.” *Id.*

The use of these terms in the ESA provides additional guidance. In 1978, it was widely accepted among taxonomists that “subspecies” was the “lowest recognizable taxon.” Mayr (1969) at 188; Simpson (1961) at 179-80 (“In present classification, however, the *only* acceptable infraspecific *category* is the subspecies.” (emphases in original)). The ESA’s 1973 definition of “species” stated that the term “includes any subspecies of fish or wildlife or plants and any other group of fish or wildlife of the same species or smaller taxa in common spatial arrangement that interbreed when mature.” Pub. L. No. 93-205 § 3(11) (species). But this “smaller taxa” language was replaced in 1978 with “any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.” 16 U.S.C. § 1532(16). In doing so, Congress explained that the new definition was intended to “exclude taxonomic categories below subspecies from the definition” of species. ESA Legislative History at 1208. As such, a “distinct population segment” should not be read to mean a lesser taxon (or variety) than “subspecies.”

Moreover, traditional canons of statutory interpretation prohibit a reading of “distinct population segment” as a population that is merely identifiably discrete. Under predominant taxonomic principles in 1978, sufficiently distinct populations within the same species were identified as subspecies. *See* Mayr (1969) at 37 (“If a taxonomist finds a population which he

considers sufficiently distinct from the population of the original type locality of the species (or of other previously named subspecies), he calls it a new *subspecies*.” (emphasis in original)). Therefore, population-level “distinctness” in 1978 already had a defined meaning and endpoint—once a population is sufficiently distinct, it is classified as a “subspecies.” Thus, to avoid reducing “subspecies” to “mere surplusage,” “distinct population segment” must refer to something different: a population that is not only sufficiently distinct but also significant to the species as a whole.

In sum, the single best meaning of “distinct population segment” is a population of animals that is both geographically discrete and uniquely important or significant for the overall conservation of the species. This new category of “species” must be understood in terms of the larger purpose of the ESA. Congress sought to protect unique genetic heritage from extinction, and, thus, a “distinct population segment” must itself be a unit that is essential to the conservation of a *larger* taxon, such that extirpation of that segment risks extinction of the larger taxon of which it is an essential part. *See* 16 U.S.C. § 1532(6) (defining “endangered species” as “any species which is in danger of extinction throughout all or a significant portion of its range”). Congress viewed the authority to list a distinct population segment as something that should be used “sparingly and only when the biological evidence indicates that such action is warranted.” S. Rep. No. 96-151 (1979), *reprinted in* ESA Legislative History at 1396–97.

B. The Rice’s Whale Does Not Meet the Definition of a “Species” Under the ESA.

1. The Rice’s whale is not a separate “species.”

The Rice’s whale fails to meet the single, best meaning of “species.” A “species,” as commonly understood in 1978, requires consistent morphological differences across multiple characters. But “[t]here is no apparent morphological difference between the Bryde’s whale in the Gulf of Mexico and those worldwide.” 81 Fed. Reg. at 88,641. In the absence of consistent, multiple morphological differences between “Rice’s whales” and Bryde’s whales, it is contrary to the ESA to designate the Gulf of America population as a separate species.

Rosel (2021) identified small and minor variations in the skull of a single adult sample from the Gulf of America population. But, as Davis (2026) explains, this sample size is simply too small to demonstrate *consistent* morphological differences. Nor can a single sample show that the morphological differences observed are the product of a separately evolving lineage rather than due to some other factor. This scant evidence cannot demonstrate a “species” under the commonly understood biological species concept. Moreover, there is no evidence that the Rice’s whale population is adequately physically separated from the Bryde’s whale population to undergo allopatric speciation. They occupy the same ecological niche and are unlikely to undergo sympatric speciation.

Additionally, the identified variations can be observed only in the skulls of deceased specimens. No method has been developed to visually distinguish living Rice’s whales from Bryde’s whales. Indeed, it is *impossible* to visually distinguish between Rice’s whale and Bryde’s whale at sea. Both putative species have sleek streamlined bodies, dark charcoal-gray coloration, and the presence of three prominent rostral ridges.

Generally accepted principles of taxonomy (now and in 1978) require more than minor variations in a single deceased adult sample to show speciation. Indeed, “[t]here is considerable individual variation in most animals.” Mayr (1942) at 13. “Every individual of a sexually reproducing species is, in general, genetically different from any other member of the species, provided they are not identical twins.” *Id.* at 24. Accordingly, “If we want to compare a form or species with another one, we compare samples (‘series’ to the taxonomist), we do not compare individuals.” *Id.* at 25.

Rosel (2021) also heavily relies on mtDNA. But speciation under the ESA is based on morphological diagnosability demonstrating reproductive isolation and speciation, not the ability to fingerprint minute parts of the mitochondria to find maternal relatives in a given population of animals. Rosel (2021) presents no evidence that those mtDNA differences result in the type of morphological or phenotypical characters that denote the speciation contemplated by Congress when it enacted and amended the ESA. There is no reason to believe that Congress wanted to differentiate morphologically identical populations as separate species simply because the populations can purportedly be distinguished based on microscopic differences in mtDNA, using advanced genetic analysis technology that did not exist in 1978. As Davis (2026) explains, “[g]enetic diagnosability, especially in mtDNA, is not equivalent to speciation; it may simply reflect restricted gene flow or recent isolation without the emergence of reproductive incompatibilities or ecological differentiation.” Davis (2026) at 3; *see also* Wolfgang Wüster, *Shedding the Mitochondrial Blinkers: A Long-Overdue Challenge for Species Delimitation in Herpetology*, 75 *Vertebr. Zool.* 259 (2025), <https://vertebrate-zoology.arphahub.com/article/161536/>; J. William O. Ballard & Michael C. Whitlock, *The Incomplete Natural History of Mitochondria*, 13 *Mol. Ecol.* 729 (2004), <https://pubmed.ncbi.nlm.nih.gov/15012752/>. In short, the “Rice’s whale” population is not a separate “species” under the ESA; it is simply a population of Bryde’s whales.

2. The Gulf of America Bryde’s whale population is not a subspecies of the Bryde’s whale.

The Gulf of America population of Bryde’s whales is also not a subspecies. A subspecies shows small, but persistent, morphological variations from other populations of the same species living in different geographical regions. No such morphological variations are present here. 81 Fed. Reg. at 88,641 (“There is no apparent morphological difference between the Bryde’s whale in the Gulf of Mexico and those worldwide.”).

Rosel (2016) concluded that the Rice’s whale was a subspecies based solely on mtDNA differences. But mtDNA differences alone do not establish the morphological variation required to delineate a subspecies under either the understanding of speciation today or when Congress enacted and amended the ESA. *See* Michael A. Patten, *Subspecies and the Philosophy of Science*, 132 *Auk* 481, 484 (2015), <https://doi.org/10.1642/AUK-15-1.1> (“Because a subspecies is defined by its morphological diagnosability . . . a researcher needs to account for phenotype as well as genotype, and genetic differences alone are not enough to define a subspecies[.]”); Mayr (1969) at 28 (“The reproductive isolation of a biological species, the protection of its collective gene pool against pollution by genes from other species, results in a discontinuity not only of the genotype of the species, but also of its morphology and other aspects of the phenotype produced

by this genotype. This is the fact on which taxonomic practice is based.”). Without persistent, diagnosable morphological differences, the Gulf of America population of Bryde’s whales is not a subspecies.

Moreover, there are inherent limitations in using mtDNA:

- Even when sequenced in its entirety, mtDNA represents a single locus rather than a representative set of genes. See Phillip A. Morin et al., *Guidelines and Quantitative Standards for Improved Cetacean Taxonomy Using Full Mitochondrial Genomes*, 114 J. Heredity 612–624 (2023), <https://doi.org/10.1093/jhered/esad049> (“Morin (2023)”). Diagnosability may indicate instances of restricted gene flow or isolation in recent, generationally speaking, terms. See Davis (2026). It is not necessarily indicative of reproductive isolation.
- In addition, mtDNA is inherited maternally and may conflict with whole genome evidence. When male-mediated gene flow is possible, mtDNA fails to capture a comprehensive picture. See Taylor (2017b). In some instances, mtDNA taxonomic classification can mislead scientists and conflict with evidence from the whole genome. See David M. Hillis et al., *Contemporary Methods and Evidence for Species Delimitation*, 109 Ichthyology & Herpetology, 895–903 (2021), <https://doi.org/10.1643/h2021082> (“Hillis (2021)”). Factors such as bottlenecks, drift, founder effects, and social structure can trigger high mtDNA diagnosability even though taxonomic differentiation may not be appropriate. See Morin (2023). If a population size is small, mtDNA can rapidly reach fixation, creating an appearance of species distinctiveness where none exists. See Davis (2026).
- Sparse or biased sampling can make mtDNA patterns appear more discrete than they are. Sample distribution, sampling procedures, sample size, sex of individuals, and evidence of sampling adequacy are core elements of a defensible taxonomic study. See Taylor (2017b). Targeted geographic sampling, particularly across possible contact zones or overlapping ranges, is important for evaluating whether populations are reproductively isolated or instead connected through ongoing gene flow. See Hillis (2021). Sample size is similarly important, as certain comparative analyses may require a minimum number of mitogenome sequences within each stratum to be meaningful. See Morin (2023). Without adequate sampling, mtDNA may reflect the structure of the dataset more than the structure of the taxon.

The subtle cranial distinctions described in Rosel (2021) do not change the conclusion that the evidence does not support a subspecies classification. As explained in Davis (2026), both the cranial distinctions and the sample size are insufficient to determine whether these differences are consistently expressed throughout the Gulf of America population or reliably distinguish that population from other Bryde’s whale populations. The standard test for subspecies requires that at least 75 percent of individuals in a population be distinguishable from 99+ percent of the individuals in other populations based on overlapping variable characters. The limited material examined in Rosel (2021) does not provide a basis for evaluating that standard. With only a single adult skull sample from the Gulf of America population and a very limited

comparative sample from other Bryde's whale populations, it is not possible to determine how frequently the reported cranial distinctions occur within the Gulf of America population or how commonly they may occur elsewhere. Accordingly, the available data are insufficient to demonstrate that the proposed cranial distinctions are diagnostic at the population level.³

3. The Gulf of America Bryde's whale population is not a distinct population segment.

In the 2016 Status Report, NMFS did not decide whether the Gulf of America Bryde's whale population qualifies as a distinct population segment. NMFS did, however, review its Distinct Population Segment Policy ("DPS Policy"), and the 2016 Status Review Team "did note" that the population

would meet the *discreteness* [sic] criterion of a DPS because they share no haplotypes with named Bryde's whale subspecies, appear to exhibit a unique acoustic call, and have a distributional hiatus from other nearest *B. e. brydei* and *B. e. edeni*. They would also meet the *significance* criterion as the 24 to 26 fixed base-pair differences between the GOMx population and other Bryde's whales worldwide indicate they have a different evolutionary pattern from other closely related taxa.

Rosel (2016) at 22 (emphases added). Assuming without agreeing that the DPS Policy represents the single best interpretation of the term "distinct population segment," this "note" in the 2016 Status Report was not supported by the best available information at the time and is not supported by the best available scientific information today. As set forth below, the Gulf of America Bryde's whale population is neither "discrete" nor "significant," and, in any event, the extremely limited best available data cannot overcome the presumption that distinct population segments are to be used "sparingly."

To demonstrate "discreteness" under the DPS Policy, the best available scientific and commercial data must show that the population in question "is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors." Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the ESA, 61 Fed. Reg. 4,722, 4,725 (Feb. 7, 1996). "Quantitative measures of genetic or morphological discontinuity may provide evidence of this separation." *Id.*

³ Compounding the problem, it is impossible to distinguish between "Rice's whales" and Bryde's whales at sea and difficult to definitively differentiate between Rice's/Bryde's whale and Sei and Fin whales that also have the potential to occur in the Gulf. During surveys, observers identify sighted whales to the lowest taxonomic level possible on the basis of characteristics observed. The result has been that, on average, 40% of all baleen whales observed on surveys have not been classified to species. However, all observations that meet the criteria for Rice's or Bryde's whale have been recorded as Rice's whales. The presumption that all observed baleen whales are "Rice's whales" renders the observer data unreliable for purposes of comparing the groups in the way necessary to identify the necessary level of distinctness between the populations to support a subspecies determination.

Applied here, historic records show that Bryde's whales inhabit the Gulf of America and waters off the Atlantic Coast along Florida and Georgia. David J. Schmidly, U.S. Fish & Wildlife Serv., FWS/OBS 80/41, *Cetaceans and Pinnipeds of the Southeastern United States Coast (From Cape Hatteras, North Carolina, to the Florida Keys) and the Gulf of Mexico* (1981). NMFS has documented "five ship-based and one aerial survey-based sightings recorded as 'Bryde's/sei whales' from the early 1990s" in surveys in the Atlantic from Florida through Maine. Rosel (2021) at 22. Bryde's whales have also been sighted in surveys from Puerto Rico to Venezuela. *Id.* at 23. Nine Bryde's whales washed up on the U.S. Atlantic Coast, two of which had mtDNA matching the Gulf of America population. *Id.* at 26. The presence of those two on the Atlantic coast undermines the assumption that whales with that mtDNA are exclusively found in the Gulf. Bryde's whales also stranded in Cuba, the Bahamas, and St. Croix. *Id.*; see also Nathalie Ward et al., *Elements for the Development of a Marine Mammal Action Plan for the Wider Caribbean: A Review of Marine Mammal Distribution* 10 (2001) (detailing Bryde's whale distribution "from the Gulf of Mexico and the Caribbean Sea southwards to Cabo Frio, Brazil" including sightings in the Greater Antilles off the Dominican Republic, Puerto Rico, the Virgin Islands, Cuba, Grenada, Curaçao, Venezuela, and Colombia among other locations).⁴ Recent acoustic data identify Bryde's whales in Mexican waters in the Gulf of America. See Amanda J. Debich et al., NOAA, USCFSC Ref. Doc. MMTD-2026-08, *Rice's Whale (Balaenoptera ricei) Passive Acoustic Detections Report: August 2024 – July 2025* (2025), <https://repository.library.noaa.gov/view/noaa/73421> ("Debich (2026)"). Without knowing the actual range of a Gulf of America Bryde's whale "population" or how that population may be mixing with other Bryde's whale populations, there is no rational basis to conclude, based on the best available data, that any such population is markedly separated from other Bryde's whale populations.

The 2016 Status Report suggested discreteness based on the lack of shared mtDNA haplotypes with other populations, but that misconstrues the DPS Policy and the best available data. The testing of the stranded whales on the U.S. Atlantic Coast showed that the purported Gulf of America Bryde's whale population overlaps with the larger Bryde's whale population. Moreover, there are no data showing that Bryde's whales off Mexico in the Gulf of America (recently identified by passive acoustic monitoring) share, or do not share, mtDNA attributes with the whales identified off the Gulf of America. Nor does NMFS have any genetic data on the Bryde's whales observed off Puerto Rico, Cuba, or elsewhere in the Caribbean. And to the extent variations in whale calls are sufficient to delineate a population (they are not), NMFS has no comparators for the calls of the whales found in these nearby areas.

The available acoustic data are of limited use because of significant gaps in the knowledge. First, there has been an insufficient comparison of the calls of "Rice's whales" to those of other baleen whales including other Bryde's-type whales with more global distribution to demonstrate that they are distinct and different. This is because there is no indication that researchers have accessed and statistically assessed sonograms that exist in call libraries, nor have they addressed issues raised by differential recording technologies since the 1990s as well

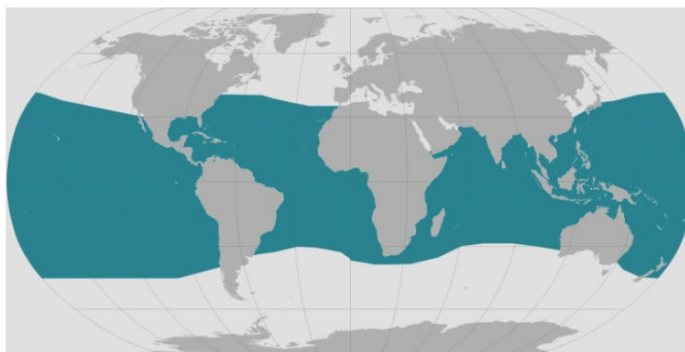
⁴ See also J. Bolaños-Jiménez et al., *Occurrence of Bryde's whales (Balaenoptera edeni) in Venezuelan Waters of the Southern Caribbean Upwelling System* (Sci. Comm. of Int'l Whaling Comm'n, Working Paper No. SC/70/NH/05, 2026).

as differential effort level across the spectrum of Bryde's-like distribution. Second, researchers since 2022 have not consistently distinguished between what was originally called "the long moan" and the "western variant of the long moan," making it difficult to determine why the different calls exist. The apparent assumption by researchers that both calls are made by "Rice's whales" has never been established. Third, the "western variant of the long moan" has never been visually matched to any baleen whale. And finally, too little is known about the Bryde's whale life cycle to determine whether the different calls relate to different activities or different whales.⁵

In short, NMFS cannot identify a "distinct population segment" when it does not even know the range or scope of that population it claims is discrete. Based on the best available data, the DPS Policy's "discreteness" factor cannot be satisfied.

With respect to "significance," the DPS Policy identifies four factors. As explained below, none of those apply to Gulf of America Bryde's whales.

Factor 1 is: "Persistence of the discrete population segment in an ecological setting unusual or unique for the taxon." DPS Policy at 4,725. Bryde's whales have a broad circum-global distribution in tropical, subtropical, and warm-temperate waters between approximately 40 degrees N and 40 degrees S latitude. See NOAA Fisheries, *Bryde's Whale*, <https://www.fisheries.noaa.gov/species/brydes-whale> (last visited June 29, 2026).



World map providing approximate representation of the Bryde's whale range

Consequently, the occurrence of a Bryde's whale population in the Gulf of America is not biogeographically unusual but falls within the expected distribution of the species complex.

Factor 2 is: "Evidence that loss of the discrete population segment would result in a significant gap in the range of a taxon." DPS Policy at 4,725. There is no evidence demonstrating that this factor is satisfied, especially given the broad distribution of the Bryde's whale species. The Gulf of America is, at most, a tiny part of the range of the taxon.

⁵ Since 2016, passive acoustic monitoring has substantially expanded scientific understanding of whale occurrence beyond the historically recognized core area. However, passive acoustic monitoring data document acoustic occurrence rather than population identity, abundance, or demographic connectivity, and therefore cannot by themselves resolve population boundaries or taxonomic status.

Factor 3 is: “Evidence that the discrete population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range[.]” *Id.* This factor is inapplicable since there are no introduced populations of the Bryde’s whale.

Factor 4 is: “Evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics.” *Id.* This factor is also not satisfied for the reasons explained above. At most, there is evidence of (i) very minor differences in skull shape based on a sample size of one and (ii) mtDNA differences that may simply be the result of past historic whaling practices in the Gulf of America. *See* Davis (2026); *see also* Simpson (1961) at 77 (small samples and single specimens “only give lower confidence levels and poorer estimates of population ranges, and these deficiencies can and must be taken into account”). Moreover, as commonly understood in taxonomy when Congress coined the term “distinct population segment” in 1978, “[a]ll populations vary, and the variation is an essential part of their nature and their definition” without “single fixed patterns or types.” Simpson (1961) at 65.

Finally, it bears emphasis that there is an extreme lack of data relevant to the question whether the loss of any Gulf of America Bryde’s whale population would create a “significant gap” in the range of the taxon or otherwise imperil the species as a whole. The geographic range, population size, and population trend of Gulf of America Bryde’s whales are unknown. NMFS may not fill that dearth of information by assuming that those data, if available, would demonstrate that the population is so significant to the worldwide Bryde’s whale species that it must receive the special protections of the ESA. *Trout Unlimited v. Lohn*, 645 F. Supp. 2d 929, 947 (D. Or. 2007) (“the default position for all species is that they are not protected under the ESA” and the ESA “cannot be read to require an agency to ‘give the benefit of the doubt to the species’ under Section 4 if the data is uncertain or inconclusive”).

C. The 2016 and 2021 Listing Decisions Were Seriously Flawed and Inconsistent with the ESA.

The decisions to list the Gulf of America population of Bryde’s whales under the ESA as a subspecies and then as a separate species were procedurally and substantively flawed for multiple reasons. These procedural and substantive flaws, described below, present compelling reasons to withdraw the prior listing decisions.

1. Failure to articulate a standard for the terms “species” or “subspecies.” Both the subspecies and species determinations are marred by NMFS’s failure to articulate definitions of these terms during the listing process. The determination that a population of animals is a “species” under the ESA is a *legal and regulatory* determination. 16 U.S.C. § 1533(a)(1) (“The Secretary shall by regulation promulgated in accordance with subsection (b) determine whether any species is an endangered species or a threatened species[.]”). As part of that process, NMFS was required to articulate the standards it was applying to its regulatory decision, particularly when those standards involved interpretation of statutory terms. *Defs. of Wildlife v. Norton*, 258 F.3d 1136, 1146 (9th Cir. 2001). NMFS failed to do so.

2. NMFS improperly used a conservation species concept. Although NMFS was silent in its listing decisions regarding its interpretation of “species” or “subspecies,” the actions surrounding those decisions show that NMFS scientists were driven by a “conservation species concept” through which application of new taxonomic standards and associated decisions were motivated by the regulatory consequences those standards and decisions would produce. This is readily apparent in the Workshop where NMFS scientists described the “conservation” need for taxonomic distinctions and thereby create new, rare subspecies that would be a “*cause célèbre* [sic].” Reeves (2004) at 28. And those new taxonomic standards abandoned, without explanation, the need for “morphological data to meet an evidentiary standard for establishing (or rejecting) additional species.” *Id.* at 29. This “conservation ends justifies the means” approach was also readily apparent in the 2017 Special Issue, in which NMFS scientists (Dr. Taylor and Dr. Rosel) identified the need to create additional taxa because “[n]amed taxonomic units, particularly when they occur entirely within the waters of single nations, are almost certain to be accorded a higher management priority than groups of individuals that are regarded simply as part of a widely distributed taxon.” Taylor (2017a) at 14. To achieve that result, Dr. Taylor and Dr. Rosel created a test for cetacean subspecies that would allow for taxonomic inflation by specifically permitting the recognition of new “subspecies” with *no morphological differences* (and based solely on mtDNA).

3. The conservation species concept is inconsistent with the ESA. The listing of a species as “endangered” under the ESA triggers very significant regulatory consequences. Upon listing, every federal agency is required to ensure that its actions do not jeopardize that continued existence of the listed species. 16 U.S.C. § 1536(a)(2). The ESA prohibits the possession, sale, and transport of any such species and prohibits the “take” (as broadly defined in the ESA) of any member of that species. *Id.* § 1538. Violations of these prohibitions can trigger severe civil and criminal penalties. *Id.* § 1540.

After the decision in *TVA v. Hill*, members of Congress were concerned about the reach and impact of the ESA. To address those concerns, they amended the statute to require that listing decisions be based “solely on the basis of the best scientific and commercial data available.” *Id.* § 1533(b)(1)(A). Although the ESA has a conservation focus, this *best available data* mandate prohibits NMFS from giving the “benefit of the doubt” to species or erring on the side of “conservation” to trigger regulatory standards that would otherwise not apply in the absence of data. *Me. Lobstermen’s Ass’n v. Nat’l Marine Fisheries Serv.*, 70 F.4th 582, 586 (D.C. Cir. 2023). Indeed, “[t]he Service’s role as an expert is undermined, not furthered, when it distorts that scientific judgment by indulging in worst-case scenarios and pessimistic assumptions to benefit a favored side.” *Id.*; *see also Trout Unlimited*, 645 F. Supp. 2d at 947 (ESA “cannot be read to require an agency to ‘give the benefit of the doubt to the species’ under Section 4 if the data is uncertain or inconclusive,” as such an interpretation “would require listing a species as threatened if there is any possibility of it becoming endangered in the foreseeable future . . . result[ing] in all or nearly all species being listed as threatened”).

Under these circumstances, it is implausible to believe that Congress intended to give agencies discretion to create expansive new concepts for “species” and “subspecies” that departed so fundamentally from the understanding of those terms at the time of enactment and

would allow for the creation of countless new species and subspecies based on miniscule, unobservable differences. Indeed, NMFS scientists relied on the “conservation species concept” specifically to *avoid* the fact that the best available data do not support identifying additional species. *See, e.g.*, Reeves (2004) at 29 (“we do not have enough morphological data to meet an evidentiary standard for establishing (or rejecting) additional species”); Taylor (2017a) at 12-13 (endorsing new subspecies criteria “because it allows for naming a subspecies when there is uncertainty about whether lineages have diverged sufficiently for species-level recognition”). This approach was entirely divorced from both the plain language and policy of the ESA. The ESA’s *best available data* mandate was specifically intended “to avoid needless economic dislocation produced by agency officials zealously but unintelligently pursuing their environmental objectives.” *Bennett*, 520 U.S. at 176-77.

The admitted “conservation” bias of the NMFS scientists who zealously pursued the Rice’s whale listing infected nearly all their decisions about the available data. As one example, NMFS conveniently assumed that the two Bryde’s whales with mtDNA matching the Gulf of America population stranded in North and South Carolina were “extralimital” strays from the Gulf of America that drifted there as sick or dead animals. Rosel (2016) at 11 (“Movement of sick or dead whales from the northeastern [Gulf of America] to the Atlantic is plausible as animals could get caught in the Loop Current which flows out of the eastern [Gulf of America] past peninsular Florida and joins the Gulf Stream flowing northward along the southeast U.S. coast.”). As another example, NMFS dismissed the presence of Bryde’s whales off the U.S. Atlantic Coast and in the Caribbean as a “hypothesis” even though NMFS has recorded visual sightings of Bryde’s whales in those areas. *Id.*

4. NMFS improperly deferred the 2016 “subspecies” determination to the SMM Committee and misrepresented the SMM Committee as “independent.” As described in the 2016 Status Report, NMFS invited the SMM Committee to decide (by vote) whether Gulf of America Bryde’s whales constituted a “subspecies” and then treated the SMM Committee’s “decision” as entirely dispositive for regulatory purposes. *See* 81 Fed. Reg. at 88,641. Although NMFS may solicit opinions from other scientists, the regulatory obligation for determining species and subspecies resides with NMFS. 16 U.S.C. § 1533(a)(1). Instead, for Gulf of America Bryde’s whales, that determination was made by the vote of a non-profit conservation organization without any explanation about what (if any) taxonomic standards were applied and without any disclosure as to who voted and why they voted the way they did. To make matters worse, NMFS misleadingly described the SMM Committee as “an independent group of experts on cetacean taxonomy.” Rosel (2016) at 22. The SMM Committee was *not* “independent” of NMFS as it was chaired in 2015 by NMFS employee Dr. Perrin and included Dr. Rosel (who later chaired the SMM Committee) and at least two other NMFS employees (Dr. Thomas A. Jefferson and Dr. Robert L. Brownell, Jr.) as members.⁶

⁶ Soc’y for Marine Mammalogy, Comm. on Taxonomy, *List of Marine Mammal Species and Subspecies* 21 (Oct. 2015), https://www.marinemammalscience.org/wp-content/uploads/2014/09/Society-for-Marine-Mammalogy-Taxonomy-List-2015-10-15.pdf?_gl=1*1oglyyk*_ga*MjA5Njk1MTUzNy4xNzc5MjEzNTM4*_ga_8FBDXBEPD0*czE3ODA1MDc2NjUkbzYkZzEkdDE3ODA1MDgyMzMkajM1JGwwJGgw.

5. NMFS 2021 “species” determination is marred by undisclosed conflicts.

NMFS’s 2021 listing of the “Rice’s whale” as a separate species repeats and extends the errors of the 2016 listing decision. These include:

- NMFS allowed the “species” determination to be made by the SMM Committee, treating NMFS’s role as a ministerial one of simply giving “notice” to the public of a change in status “that reflects decisions already taken in the scientific community.” 86 Fed. Reg. at 47,023. NMFS—not a non-profit conservation organization—is supposed to make the legal and regulatory determinations required by the ESA.
- NMFS claimed that the 2021 decision was “supported by a study published in a peer-reviewed journal and independent acceptance by the Society for Marine Mammalogy Committee on Taxonomy.” *Id.* But that “study” was written by Dr. Rosel, and NMFS failed to disclose that the “journal” was published by the SMM, that Dr. Rosel was the editor of that journal, and that Dr. Rosel was the Chair of the SMM Committee at that time. None of these conflicts were disclosed by NMFS.
- The 2021 decision cited Reeves (2004) as the standard for determining a species but failed to disclose that Reeves (2004) promoted the conservation species concept in lieu of the standard biological species concept.
- Even applying Reeves (2004)’s conservation species concept, the Rice’s whale is not a “species.” The 2021 decision misstates Reeves (2004) as stating that “two independent lines of evidence were necessary for delimiting species.” *Id.* Rather, Reeves (2004) said that “[m]ultiple lines of evidence are essential, and what ultimately matters is that a convincing argument is provided demonstrating irreversible divergence.” Reeves (2004) at 5. Neither Rosel (2021) nor the 2021 listing decision presents a “convincing” case “demonstrating irreversible divergence” between the Gulf of America Bryde’s whale population and other Bryde’s whale populations. There is no such evidence. *See* Davis (2026) at 3 (“no comparable nuclear evidence currently demonstrates that Rice’s whale represents an irreversibly diverged lineage”). Rosel (2021) claims a “species” can be established based on two lines of evidence and uses a miniscule difference in a single skull sample and microscopic mtDNA data. But, as explained above, that evidence is insufficient to show speciation and does not establish “irreversible divergence.”

D. Additional Information Available After 2016 Casts Further Doubt on the Listing Decision.

During the 2016 status review, the Gulf of America Bryde’s whale population was estimated at 33 whales and presumed to be limited to a small area in the Eastern Gulf. Since that time, the population estimates have only increased as a result of increased survey efforts. By

2020, NMFS estimated 44 whales,⁷ and by 2025, NMFS estimated 51 whales.⁸ NMFS also states that the most recent estimate “may be an under estimate” and that the population “may be larger, with an abundance estimate of 121 animals.” 2025 BiOp at 166.

Additionally, since 2016, there has been a genetically confirmed individual from the Western Gulf, additional visual sightings of Bryde’s-like whales outside the core distribution area in the Gulf of America, passive acoustic monitoring detections along portions of the northwestern Gulf shelf break, and detections from Mexican waters. *See, e.g.,* Rosel 2021; Melissa S. Soldevilla et al., *Rice’s Whale Occurrence in the Western Gulf of Mexico from Passive Acoustic Recordings*, 40 Mar. Mammal Sci. (2024), <https://doi.org/10.1111/mms.13109>; Laura Aichinger Dias et al., NOAA, USCFSC Ref. Doc. MMTD-2025-02, *Aerial Survey in the Western Gulf of America Using the Forward Motion Camera System, April 2024* (2025), <https://repository.library.noaa.gov/view/noaa/67346>; Debich (2025); Itzel Pérez-Carballo et al., NOAA, MPL Technical Memorandum #678, *LISTEN GoMex: 2020-2025 - Long-term Investigations into Soundscapes, Trends, Ecosystems, and Noise in the Gulf of Mexico* (2026), <https://repository.library.noaa.gov/view/noaa/72663>. Collectively, these studies have expanded understanding of potential Rice’s whale occurrence beyond what was available during the 2016 status review and suggest that the species, or whales attributed to the species, may occur across a broader geographic area than was previously assumed. Each additional study continues to shed light on the fact that there simply is not enough known about this population of animals in terms of range and numbers to conclude that it is a separate species, a subspecies, or threatened with extinction.

The assumed worst-case “risks” described in the 2016 Status Report have also not borne out. For example, the 2016 Status Report identified vessel strikes as a serious risk to the population (without evidence). *See* 2016 Status Report at 86. But there has not been a single Rice’s whale vessel strike reported since the 2016 Status Report.⁹ The 2016 Status Report also identified the risk that the Eastern Planning Area could potentially be opened to oil and gas activity in 2022, but that did not happen, and instead the moratorium was extended until at least 2032. *Id.* at 85. The 2016 Status Report also identified the risk of a Deepwater Horizon-type blowout and associated response activities. Since that time, BOEM and BSEE have implemented significant regulatory and technological changes, including enhanced blowout preventer

⁷ Nat’l Marine Fisheries Serv., *Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico* 168 (Mar. 13, 2020), <https://repository.library.noaa.gov/view/noaa/23738>; *see also* NOAA Technical Memorandum NMFS-NE-271, *U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments 2020*, at 161 (Sean A. Hayes et al., eds. July 2021), <https://repository.library.noaa.gov/view/noaa/32072> (estimating 51 Bryde’s whales).

⁸ Nat’l Marine Fisheries Serv., *Biological and Conference Opinion on Bureau of Ocean Energy Management and Bureau of Safety and Environmental Enforcement’s Oil and Gas Program Activities in the Gulf of America* 165–66 (May 20, 2025), <https://repository.library.noaa.gov/view/noaa/71211> (“2025 BiOp”); *see also* NOAA Technical Memorandum NMFS-NE-336, *U.S. Atlantic and Gulf of America Marine Mammal Stock Assessments 2024*, at 12 (Sean A. Hayes et al., eds. July 2025), https://www.fisheries.noaa.gov/s3/2026-04/atlantic_2024_mmsars.pdf (estimating 51 Rice’s whales).

⁹ Recent studies also demonstrate that NMFS has overestimated vessel traffic volumes through Rice’s whale habitat area. *See* CSA Ocean Sciences Inc., *Port Fourchon Vessel Activity Data Review 1–15* (May 2026), Doc. No. CSA-API-FL-26-82856-4282-02-REP-01-004.

Comments of API, et al.

July 6, 2026

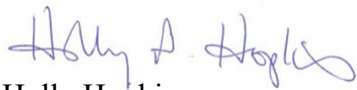
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requirements and deployment of capping stack response systems (now successfully tested), which have made a blowout of similar magnitude highly unlikely. *Id.*; see Press Release, Bureau of Safety & Env't Enf't, *BSEE Oversees Two Successful Capping Stack Drills in the Gulf of Mexico* (May 24, 2023), <https://www.bsee.gov/newsroom/latest-news/statements-and-releases/press-releases/bsee-oversees-two-successful-capping>.

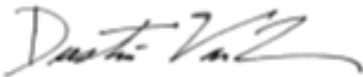
* * *

Thank you for considering these comments. Please do not hesitate to contact the undersigned with any questions.

Sincerely,



Holly Hopkins
Vice-President, Upstream Policy
American Petroleum Institute



Dustin Van Liew
SVP Global Policy
EnerGeo Alliance



David Duke
Associate Director, Offshore Operators Committee



Erik Milito
President, National Ocean Industries Association



Tommy Faucheux
President, Louisiana Mid-Continent Oil and Gas
Association