



DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[FXES1111090FEDR-256-FF09E21000]

Endangered and Threatened Wildlife and Plants; Two Species Not Warranted for Listing as Endangered or Threatened Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notification of findings.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce findings that two species are not warranted for listing as endangered or threatened species under the Endangered Species Act of 1973, as amended (Act). After a thorough review of the best available scientific and commercial information, we find that it is not warranted at this time to list the cannulate cave isopod (*Pseudobaicalasellus cannula*) and Dry Fork Valley cave beetle (*Pseudanophthalmus montanus*). However, we ask the public to submit to us at any time any new information relevant to the status of any of the species mentioned above or their habitats.

DATES: The findings in this document were made on [INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: Detailed descriptions of the bases for these findings are available on the internet at <https://www.regulations.gov> under the following docket numbers:

Species	Docket Number
Cannulate cave isopod	FWS-R5-ES-2025-0035
Dry Fork Valley cave beetle	FWS-R5-ES-2025-0036

Those descriptions are also available by contacting the appropriate person, as specified under **FOR FURTHER INFORMATION CONTACT**. Please submit any new information, materials, comments, or questions concerning these findings to the appropriate person, as

specified under **FOR FURTHER INFORMATION CONTACT**.

FOR FURTHER INFORMATION CONTACT: Jennifer Norris, Field Supervisor, West Virginia Field Office, 304–866–3858, Jennifer_L_Norris@fws.gov. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

SUPPLEMENTARY INFORMATION:

Background

Under section 4(b)(3)(B) of the Act (16 U.S.C. 1533(b)(3)(B)), we are required to make a finding on whether or not a petitioned action is warranted within 12 months after receiving any petition that we have determined contains substantial scientific or commercial information indicating that the petitioned action may be warranted (“12-month finding”). We must make a finding that the petitioned action is: (1) not warranted; (2) warranted; or (3) warranted, but precluded by other listing activity. We must publish a notification of these 12-month findings in the *Federal Register*.

Summary of Information Pertaining to the Five Factors

Section 4 of the Act (16 U.S.C. 1533) and the implementing regulations at part 424 of title 50 of the Code of Federal Regulations (50 CFR part 424) set forth procedures for adding species to, removing species from, or reclassifying species on the Lists of Endangered and Threatened Wildlife and Plants (Lists). The Act defines “species” as including 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. The Act defines an “endangered species” as a species that is in danger of extinction throughout all or a significant portion of its range (16 U.S.C. 1532(6)) and a “threatened species” as a species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (16 U.S.C.

1532(20)). Under section 4(a)(1) of the Act, the Secretary of the Interior (Secretary) may determine whether any species is an endangered species or a threatened species because of any of the following five factors:

- (A) The present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) Overutilization for commercial, recreational, scientific, or educational purposes;
- (C) Disease or predation;
- (D) The inadequacy of existing regulatory mechanisms; or
- (E) Other natural or manmade factors affecting its continued existence.

These factors represent broad categories of natural or human-caused actions or conditions that could have an effect on a species' continued existence. In evaluating these actions and conditions, we look for those that may have a negative effect on individuals of the species, as well as other actions or conditions that may ameliorate any negative effects or may have positive effects.

We use the term "threat" to refer in general to actions or conditions that are known to or are reasonably likely to negatively affect individuals of a species. The term "threat" includes actions or conditions that have a direct impact on individuals (direct impacts), as well as those that affect individuals through alteration of their habitat or required resources (stressors). The term "threat" may encompass—either together or separately—the source of the action or condition or the action or condition itself. However, the mere identification of any threat(s) does not necessarily mean that the species meets the statutory definition of an "endangered species" or a "threatened species." In determining whether a species meets either definition, we must evaluate all identified threats by considering the species' expected response and the effects of the threats—in light of those actions and conditions that will ameliorate the threats—on an individual, population, and species level. We evaluate each threat and its expected effects on the species, then analyze the cumulative effect of all of the threats on the species as a whole. We also

consider the cumulative effect of the threats in light of those actions and conditions that will have positive effects on the species, such as any existing regulatory mechanisms or conservation efforts. The Secretary determines whether the species meets the definition of an “endangered species” or a “threatened species” only after conducting this cumulative analysis and describing the expected effect on the species.

The Act does not define the term “foreseeable future,” which appears in the statutory definition of “threatened species.” Our implementing regulations at 50 CFR 424.11(d) set forth a framework for evaluating the foreseeable future on a case-by-case basis, which is further described in the 2009 Memorandum Opinion on the foreseeable future from the Department of the Interior, Office of the Solicitor (M-37021, January 16, 2009; “M-Opinion,” available online at <https://www.doi.gov/sites/doi.opengov.ibmcloud.com/files/uploads/M-37021.pdf>). The foreseeable future extends as far into the future as the U.S. Fish and Wildlife Service and National Marine Fisheries Service can make reasonably reliable predictions about the threats to the species and the species’ responses to those threats. We need not identify the foreseeable future in terms of a specific period of time. We will describe the foreseeable future on a case-by-case basis, using the best available data and taking into account considerations such as the species’ life-history characteristics, threat projection timeframes, and environmental variability. In other words, the foreseeable future is the period of time over which we can make reasonably reliable predictions. “Reliable” does not mean “certain”; it means sufficient to provide a reasonable degree of confidence in the prediction, in light of the conservation purposes of the Act.

In conducting our evaluation of the five factors provided in section 4(a)(1) of the Act to determine whether the cannulate cave isopod and Dry Fork Valley cave beetle meet the Act’s definition of an “endangered species” or a “threatened species,” we considered and thoroughly evaluated the best scientific and commercial information available regarding the past, present, and future stressors and threats. We reviewed the petition, information available in our files, and

other available published and unpublished information for the species. Our evaluation may include information from recognized experts; Federal, State, and Tribal governments; academic institutions; foreign governments; private entities; and other members of the public.

In accordance with the regulations at 50 CFR 424.14(h)(2)(i), this document announces the not-warranted findings on petitions to list the two species. We have also elected to include brief summaries of the analyses on which these findings are based. We provide the full analyses, including the reasons and data on which the findings are based, in the decisional file for each of the actions included in this document. Below, we describe the documents containing these analyses.

The species assessment forms for the cannulate cave isopod and Dry Fork Valley cave beetle each contain more detailed biological information, a thorough analysis of the listing factors, a list of literature cited, and an explanation of why we determined that these species do not meet the Act's definition of an "endangered species" or a "threatened species." To inform our status reviews, we completed species status assessment (SSA) reports for these two species. Each SSA report contains a thorough review of the taxonomy, life history, ecology, current status, and projected future status for each species. This supporting information can be found on the internet at <https://www.regulations.gov> under the appropriate docket number (see **ADDRESSES**, above).

Cannulate Cave Isopod and Dry Fork Valley Cave Beetle

Previous Federal Actions

On April 20, 2010, we received a petition from the Center for Biological Diversity, Alabama Rivers Alliance, Clinch Coalition, Dogwood Alliance, Gulf Restoration Network, Tennessee Forests Council, and West Virginia Highlands to list 404 aquatic, riparian, and wetland species, including the cannulate cave isopod (*Pseudobaicalasellus cannula*) and Dry Fork Valley cave beetle (*Pseudanophthalmus montanus*), as endangered or threatened species under the Act. On September 27, 2011, we published a partial 90-day finding (76 FR 59836) that

the petition contained substantial information indicating listing may be warranted for these two species (*note*: The September 27, 2011, publication refers to the cannulate cave isopod (*Pseudobaicalasellus cannula*) as *Caecidotea cannula*). This document constitutes our 12-month finding on the April 20, 2010, petition to list the cannulate cave isopod and Dry Fork Valley cave beetle under the Act.

Summary of Finding

The cannulate cave isopod is a cave-obligate crustacean that is only known to occur in nine caves in Preston, Tucker, and Randolph Counties, West Virginia. The cannulate cave isopod requires a karst environment devoid of light with stable climate conditions, such as temperature and humidity, and a cave stream. To provide adequate habitat, the stream must be small- to medium-sized with substrate and flat rocks that create interstitial spaces for the isopod to feed and shelter during periods of increased stream velocity. The species also requires nutrients derived from the surface for feeding.

The Dry Fork Valley cave beetle is an Appalachian endemic species that represents archaic populations of ground beetles that colonized caves during the Pleistocene epoch. It occurs in three caves in Tucker County, West Virginia. Similar to the cannulate cave isopod, the Dry Fork Valley cave beetle requires a karst environment devoid of light with stable climate conditions, such as temperature and humidity, and a cave stream. Unlike the isopod, the Dry Fork Valley cave beetle does not inhabit the stream but instead uses riparian mudbanks and other moist areas within limestone caves. The Dry Fork Valley cave beetle is a carnivorous, opportunistic feeder whose diet may consist of small earthworms, aquatic worms, and cave cricket eggs, larvae, and nymphs.

We do not know the specific needs, population sizes, or population trends of either cave species. However, the best available information indicates that both species need clean water and relatively stable thermal and water flow conditions for populations to remain healthy and capable of withstanding environmental and demographic stochasticity. Based on general conservation

biology principles, we assume that the viability of both species at the species level would be best supported by multiple, self-sustaining populations distributed throughout the geographical extent of their range with sufficient diversity and time to respond to changing environmental conditions (i.e., redundancy, resiliency, and representation, respectively).

We have carefully assessed the best scientific and commercial information available regarding the past, present, and future threats to the cannulate cave isopod and Dry Fork Valley cave beetle, and we evaluated all relevant factors under the five listing factors, including any regulatory mechanisms and conservation measures addressing these threats. The primary potential threats affecting both species' biological status include water pollution, stream flow alteration, washout of habitats and individuals from increased flooding events, and increasing precipitation and temperatures.

Currently, the cannulate cave isopod and Dry Fork Valley cave beetle have naturally low redundancy because of their narrow range within nine occupied caves and three occupied caves, respectively. However, the best available information indicates both species occupy their entire known historical ranges, and there is not a high risk of catastrophic events occurring. We assume current representation has not changed from historical representation, as the known historical ranges remain occupied and none of the processes that drive evolution (i.e., gene flow, natural selection, mutations, and genetic drift) are known to be currently impacted. While species with naturally low redundancy and representation theoretically have a higher risk of extinction, the potential for catastrophic events occurring, such as a contaminant spill, is not high.

We assessed the potential effects of water contamination and stream flow alteration, along with minor threats of lesser concern, on the needs of both species and the species themselves. There may be some negative impacts to the occupied caves of both species based on the available information on surface and groundwater conditions. However, the caves themselves have experienced little change, as a majority of the caves are inaccessible. In addition, while recent survey data for these species are lacking, the best scientific and commercial data available

do not indicate a decline in either species, and we have low to very low causal certainty (degree of confidence in the belief that a specific cause-and-effect relationship exists) in all threats to the species. Causal certainty is based on evidence, where low causal certainty describes a theoretical link with limited evidence that a threat is leading to a population decline or decreased resiliency. Very low causal certainty describes a plausible link with no evidence that a threat is leading to population decline or decreased resiliency. Thus, after assessing the best available information, we conclude that the cannulate cave isopod and Dry Fork Valley cave beetle are not in danger of extinction throughout all of their respective ranges. Therefore, we proceed with determining whether the cannulate cave isopod and Dry Fork Valley cave beetle are likely to become endangered within the foreseeable future throughout all of their ranges.

In our future scenarios, water pollution, stream flow alteration, landscape condition, oil and gas development, and urban development are not expected to change significantly from the current condition. The threats to the species that may change in the future are air temperature, water temperature, and flooding frequency. While there is uncertainty in how either species will respond to potential changes in temperatures and increased flooding, the best available scientific information does not provide evidence of negative effects on the species. Similar to current conditions, we have low to very low causal certainty that these threats may affect the species. Overall, we conclude that the magnitude of most of the threats to the species will remain similar to current conditions. Thus, after assessing the best available information, we conclude that the cannulate cave isopod and Dry Fork Valley cave beetle are not likely to become endangered within the foreseeable future throughout all of their ranges.

We also evaluated whether the cannulate cave isopod or Dry Fork Valley cave beetle are endangered or threatened in a significant portion of their ranges. We did not find any portions of the cannulate cave isopod or Dry Fork Valley cave beetle ranges for which both (1) the portion is significant, and (2) the species is in danger of extinction in that portion, either now or within the foreseeable future.

The cannulate cave isopod occurs in nine caves in six analysis units, and the Dry Fork Valley cave beetle occurs in three caves in one analysis unit. The magnitude of each threat we assessed currently and in the future, and the subsequent risks to the species, is similar across all analysis units. Our evaluation identified two threats that may have different levels of impact for the two species in different portions of their range: (1) oil and gas development; and (2) flooding (i.e., washout) risk. For the isopod, three caves are located close to oil and gas activities. For the beetle, two caves are located close to oil and gas activities. We have low certainty that oil and gas development will cause the species' populations to decline. However, the continued occurrence of these species at sites where oil and gas activity is present indicates some tolerance of these activities. No quantitative data exists on population size or population trends for either species, also making future population projections difficult. Additionally, two oil wells near the Dry Fork Valley cave beetle caves are both currently abandoned and have a lower likelihood of impacting the species. Thus, we concluded from the best available data that the risk from oil and gas activities does not rise to a level that creates a large difference in the overall risk to either species in the caves potentially impacted by oil and gas activities compared to caves that are not impacted.

All caves where the Dry Fork Valley cave beetle has been found are situated within a watershed that falls under a mapped Federal Emergency Management Agency flood hazard zone. Additionally, five caves inhabited by the cannulate cave isopod are currently at risk of experiencing extreme flood events. Projections indicate that the frequency of severe precipitation is expected to increase, potentially increasing the frequency of catastrophic flooding in West Virginia. However, the impact of these flooding events on the subsurface conditions that affect the survival of both the cannulate cave isopod and the Dry Fork Valley cave beetle remains unknown, and the best available information does not indicate any evidence of washouts in any of the habitats where the species occur or any response of this species to this threat. Therefore, we found no portion of the cannulate cave isopod's or Dry Fork Valley cave beetle's range

where the biological condition of the species differs from its condition elsewhere in its range such that the status of the species in that portion differs from its status in any other portion of the species' range.

Thus, after assessing the best available information, we concluded that the cannulate cave isopod and Dry Fork Valley cave beetle are not in danger of extinction now or likely to become in danger of extinction within the foreseeable future throughout all of their ranges or in any significant portion of their ranges. Therefore, we find that listing either species as an endangered species or threatened species under the Act is not warranted. A detailed discussion of the basis for these findings can be found in the cannulate cave isopod and Dry Fork Valley cave beetle species assessment form and other supporting documents on <https://www.regulations.gov> under Docket No. FWS-R5-ES-2025-0035 and FWS-R5-ES-2025-0036 (see **ADDRESSES**, above).

Peer Review

In accordance with our joint policy on peer review published in the *Federal Register* on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review in listing actions under the Act, we solicited independent scientific reviews of the information contained in the cannulate cave isopod and Dry Fork Valley cave beetle SSA report. We sent the SSA report to four independent peer reviewers and received two responses. Results of this structured peer review process can be found at <https://www.regulations.gov> under the appropriate docket number (see **ADDRESSES**, above). We incorporated the results of these reviews, as appropriate, into the SSA report, which is the foundation for these findings.

New Information

We request that you submit any new information concerning the taxonomy of, biology of, ecology of, status of, or stressors to the cannulate cave isopod or Dry Fork Valley cave beetle to the appropriate person, as specified under **FOR FURTHER INFORMATION CONTACT**, whenever it becomes available. New information will help us monitor these species and make

appropriate decisions about their conservation and status. We encourage local agencies and stakeholders to continue cooperative monitoring and conservation efforts.

References

A complete list of the references used in these petition findings is available in the relevant species assessment form, which is available on the internet at <https://www.regulations.gov> in the appropriate docket (see **ADDRESSES**, above) and upon request from the appropriate person (see **FOR FURTHER INFORMATION CONTACT**, above).

Authority

The authority for this action is section 4 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

Signing Authority

Paul Souza, Regional Director, Region 8, Exercising the Delegated Authority of the Director of the U.S. Fish and Wildlife Service, approved this action on May 27, 2025, for publication. On May 30, 2025, Paul Souza authorized the undersigned to sign the document electronically and submit it to the Office of the Federal Register for publication as an official document of the U.S. Fish and Wildlife Service.

Jillian Eanett,

*Acting Regulations and Policy Chief,
Division of Policy, Economics, Risk Management, and Analytics of the Joint Administrative
Operations,
U.S. Fish and Wildlife Service.*

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