



Fungus Manipulates Spiders Into “Zombie” State

Description

Fungi, often overlooked in the tapestry of life, play a crucial role in ecosystems worldwide. From decomposing matter to forming symbiotic relationships, fungi are silent architects of nature.

A recent discovery of a fungus on a spider sheds light on these remarkable organisms. Scientists found a new species of fungus, *Gibellula attenboroughii*, named after Sir David Attenborough. Dr. Harry Evans led the research, uncovering this unique fungus during the BBC Winterwatch series in Northern Ireland.

Morphological and molecular evidence confirmed a novel species, linking it to Sir David Attenborough due to his contributions to natural history programming. The infected spiders, including *Metellina merianae* and *Meta menardi*, exhibited unusual behavior, reminiscent of "zombie-ant fungi" in ants in Brazil's rainforest.

The study, published in *Fungal Systematics and Evolution*, revealed hidden diversity in the genus *Gibellula* in the British Isles. Fungi like *Gibellula attenboroughii* might impact spider populations significantly, regulating their numbers and playing a crucial role in ecosystem stability.

The discovery underscores the importance of studying fungi, providing insights into ecological dynamics and potential industrial or pharmaceutical applications. By honoring Sir David Attenborough, the study celebrates curiosity and the interconnectedness of scientific discovery and public engagement.

Understanding how *Gibellula attenboroughii* manipulates spiders could unlock broader ecological insights. This newfound fungus offers a gateway to profound research and a deeper appreciation of the intricate connections in the natural world.

Vocabulary List:

1. **Fungi** /'fʌŋ.gəɪ/ (noun): A group of spore-producing organisms feeding on organic matter including mushrooms molds and yeast.
2. **Morphological** /,mɔːr.fə'lɒdʒ.ɪ.kəl/ (adjective): Relating to the form or structure of things.
3. **Symbiotic** /,sɪm.biə'tɪk/ (adjective): Involving interaction between two different organisms often beneficial to both.
4. **Exhibited** /ɪg'zɪbɪtɪd/ (verb): Displayed or showed something for others to see.
5. **Regulating** /'rɛg.jʊ.leɪ.tɪŋ/ (verb): Controlling or maintaining the rate or speed of a machine or process.
6. **Interconnectedness** /,ɪn.tə.kə'nɛk.ted.nəs/ (noun): The state of being connected with each other.

Comprehension Questions



Multiple Choice

1. Which scientist led the research and discovery of the fungus *Gibellula attenboroughii*?
 - Option: Dr. Harry Evans
 - Option: Sir David Attenborough
 - Option: Ratan Naval Tata
 - Option: David Attenborough
2. Where was the unique fungus *Gibellula attenboroughii* discovered?
 - Option: Northern Ireland
 - Option: Brazil
 - Option: British Isles
 - Option: Antarctica
3. What behavior did infected spiders exhibit due to the presence of *Gibellula attenboroughii*?
 - Option: Unusual behavior
 - Option: No change in behavior
 - Option: Aggressive behavior
 - Option: Flying behavior
4. In which publication was the study of *Gibellula attenboroughii* published?
 - Option: Fungal Systematics and Evolution
 - Option: Nature
 - Option: Science
 - Option: The Lancet
5. What role do fungi like *Gibellula attenboroughii* play in ecosystems?
 - Option: Regulating spider populations
 - Option: Pollinating flowers
 - Option: Hunting prey
 - Option: Creating webs
6. What did the discovery of *Gibellula attenboroughii* underscore?
 - Option: The importance of studying fungi
 - Option: The need for more spiders
 - Option: The danger of ants
 - Option: The significance of bird migration



True-False

7. The discovery of *Gibellula attenboroughii* was made in the British Isles.
8. Sir David Attenborough led the research on *Gibellula attenboroughii*.
9. The study published on *Gibellula attenboroughii* celebrates public engagement.
10. Spiders infected with *Gibellula attenboroughii* exhibited normal behavior.
11. Fungi like *Gibellula attenboroughii* may have industrial applications.
12. *Gibellula attenboroughii* offers insights into bird migration patterns.

Gap-Fill

13. Dr. Harry Evans found the unique fungus *Gibellula attenboroughii* during the BBC Winterwatch series in _____.
14. The study published in *Fungal Systematics and Evolution* revealed hidden diversity in the genus *Gibellula* in the _____.
15. Understanding how *Gibellula attenboroughii* manipulates spiders could unlock broader ecological _____.
16. The infected spiders, including *Metellina merianae* and *Meta menardi*, exhibited behavior reminiscent of "zombie-ant fungi" in ants in _____ rainforest.
17. The discovery of *Gibellula attenboroughii* highlights the importance of studying fungi for insights into ecological dynamics and potential _____.
18. Fungi like *Gibellula attenboroughii* might impact spider populations significantly, regulating _____.



their numbers and playing a crucial role in ecosystem _____.

Answer

Multiple Choice: 1. Dr. Harry Evans 2. Northern Ireland 3. Unusual behavior 4. Fungal Systematics and Evolution 5. Regulating spider populations 6. The importance of studying fungi

True-False: 7. False 8. False 9. True 10. False 11. True 12. False

Gap-Fill: 13. Northern Ireland 14. British Isles 15. insights 16. Brazil's 17. industrial 18. stability

Vocabulary quizzes

Multiple Choice (Select the Correct answer for each question.)

1. Which organisms are known for their role in decomposing organic matter?

Option: Bacteria

Option: Fungi

Option: Viruses

Option: Protozoa

2. What term describes a close and long-term biological interaction between two different biological organisms?

Option: Mutualistic

Option: Neutral

Option: Parasitic

Option: Commensalistic

3. Which process involves the decomposition of a compound using an electric current?

Option: Photosynthesis

Option: Fermentation

Option: Respiration

Option: Electrolysis

4. What term describes taking advantage of a situation for one's gain?

Option: Empowering

Option: Exploiting

Option: Collaborating

Option: Nurturing

5. What term refers to the best or most favorable conditions for something?



- Option: Adequate
- Option: Optimal
- Option: Mediocre
- Option: Substandard

6. What term is used to describe the introduction of a new product or service to the market?

- Option: Closure
- Option: Expansion
- Option: Launch
- Option: Withdrawal

7. Which term refers to a statement that explains the features of something?

- Option: Innovation
- Option: Description
- Option: Incident
- Option: Rejection

8. What term describes improvements or upgrades made to a system or process?

- Option: Decay
- Option: Regression
- Option: Stagnation
- Option: Enhancements

9. Which term refers to the exchange of information between individuals groups or entities?

- Option: Isolation
- Option: Communication
- Option: Deterioration
- Option: Interruption

10. What term describes a favorable or advantageous circumstance or a chance for progress or advancement?

- Option: Risk
- Option: Crisis
- Option: Opportunity
- Option: Failure

Gap-Fill (Fill in the blanks with the correct word from the vocabulary list.)

11. The _____ behavior of the new species intrigued scientists.

12. The artist _____ their latest works at the gallery.



13. The software update addressed several _____ errors in the calculations.
14. The government is responsible for _____ the financial industry.
15. Make sure to install the latest _____ to enhance the performance of your devices.
16. Before updating the software check the _____ for a list of changes.
17. You can customize the app by adjusting the _____ to suit your preferences.
18. The internet _____ offers a range of subscription plans for users.
19. The disappearance of the ancient artifact remains a _____ mystery.
20. The concept of _____ emphasizes the complex relationships between all living beings.

Matching Sentences (Match each definition to the correct word from the vocabulary list.)

21. The laboratory study focused on the effects of various organisms on soil health.
22. After stirring the sugar completely in the water.
23. The new policy changes have significant for the local community.
24. play a crucial role in breaking down dead plant material in the forest.
25. The scientist studied the characteristics of the newly discovered species.
26. The museum will rare artifacts from ancient civilizations next month.
27. The conclusion of the research project will the key findings.
28. Users can set up personalized for breaking news updates.
29. Governments play a vital role in industries to ensure fair competition.
30. The new theory represents a shift in the of modern physics.



Answer

Multiple Choice: 1. Fungi 2. Mutualistic 3. Electrolysis 4. Exploiting 5. Optimal 6. Launch 7. Description
8. Enhancements 9. Communication 10. Opportunity

Gap-Fill: 11. peculiar 12. exhibited 13. numerical 14. regulating 15. firmware 16. changelog 17. settings
18. provider 19. baffling 20. interconnectedness

Matching sentence: 1. microbial 2. dissolved 3. implications 4. Fungi 5. morphological 6. exhibit 7.
encapsulate 8. alerts 9. regulating 10. paradigm

CATEGORY

1. Sci/Tech - LEVEL6

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