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#### PROSE FICTION: Three Laws

It's easy to imagine Mercer, but trickier to remember it. In my mind I reassemble the city from a stock of memories that grow a little more ghostly each time I summon them. The morning always appears 5 first—the liquid shine of fresh-washed sheet glass, two veterans in Roosevelt Park asleep beneath the shadow of a bronzed anchor; stray dogs swallowing bits of soft pretzel scavenged from behind the fair grounds—these 60 scenes I return to often, and they've become like old, 10 handspun lace-intricate, diaphanous and fragile. I sometimes wonder, when at last that lone thread of true memory wears through, whether or not the whole reverie, like lace, will unravel.

Of course it's possible to approach Mercer from 15 without; to finger it on the globe, or trace the serpentine belly of Highway 51 across the pages of a road atlas, right through the hills of Pennsylvania into town. But that's not the town that I remember. My 70 memories begin in the center and radiate outward like a 20 ripple, dying off as they collide with the hilltops that surround the valley.

The poet James Wright once wrote that no one would choose to die in Mercer. He might be right. But the people who inhabit Mercer when I remember it 25 don't die. They don't have the energy to die. They say that, in the universe, energy can't be created or destroyed. but transferred, transformed—that's something I learned after I left for school. And all the energy must have left Mercer a long time before I did. I 30 can imagine the last clay-red train sputtering out of Rodney Station-cargo load just half-full of oreleaving Mercer and the ground beneath it hollow.

I suppose that's the trouble with a mining town. It thrives on the land like an unwary parasite, marveling 35 at its own good fortune. But when the host gives out, it's hopeless. With every shard of anthracite picked clean from the river bed, I can see the kids who live outside of town, staggering home along the banks, galvanized buckets dangling empty from their hands. Maybe that's what bothered James Wright-not wanting to die on dead land. But when I remember Mercer, the people there live on arrested, unable to grow or die, and a few mad miners persist, still hollowing out the mountains from a mile underground.

45 Sometimes I try to imagine how the town has changed-which store windows on Market Street are empty, boarded up, or shattered, and whether the train yard is overgrown now in either rust or wildflowers. Left alone, the universe tends toward maximum chaos. That's another thing I learned at school. If that's true,

then I guess Mercer must have fallen apart entirely, and suddenly I see the valley sinking, as the mountains stretch out and fold in overtop, like kneaded dough, burying the town, breaking it, and redistributing the pieces throughout the soil. Other times it seems more likely it's just my memories of Mercer that are being swallowed up. I guess eventually there will be two Mercers—the one I left in Pennsylvania, and the one that I return to, built up and founded entirely in my mind.

But tonight, at least, I'm remembering the Ferris wheel on the fair grounds, its girders lit by ten dozen lemon-yellow incandescent bulbs, writing huge, desolate zeroes in the late August night. Light in motion I remember clearly. I can see the white-hot glow of furnaces through a glass factory window; the probing gleam of headlights sliding across the ceiling as a car turns down my old street. There's an old trick used to prove that light travels as a wave—close up, light shining through a keyhole will just take the shape of a keyhole, but if the beam travels a greater distance, it refracts, and reveals the gaps and fissures of darkness hidden within. The lights of Mercer reach me in the far-field; blurred and fractured by the long journey they've taken. Like starlight, I can't even be sure the source is still extant. But if light is a wave lapping against us; an ocean oscillating through illumination and shadow, then time is the tide, and it pulls a sea of light onto the shore, engulfing and flooding it. Then light recedes, taking with it what was left too near waves, and leaves the rest, at last, in darkness.

- 1. Which of the following can we infer describes the narrator?
- A. A traveler on a visit to the town of Mercer
- B. A former resident of Mercer recollecting the town
- C. A current townsperson residing in Mercer
- D. A poet who says people wont choose to die in Mercer
- 2. What attribute of the lace does NOT make it a fitting metaphor for the ideas being expressed in paragraph 1 (lines 1-13)?
- F. its frailty
- G. its complexity
- H. its color
- J. its thickness

- 3. Based on the circumstantial description in the passage as a whole, what substance can we infer is most likely being mined in the town of Mercer?
- A. Diamonds
- B. Silver
- C. Bronze
- D. Coal
- 4. The recollections of the narrator are best described as which of the following?
- F. Clear
- G. Absent
- H. Hazy
- J. Imaginary
- 5. Which of the following can we infer that the narrator would most likely believe about the nature of existence?
- A. Mental processes alone are not real; there must be physical reality
- B. Mental processes alone can be real; the physical reality needs no longer to exist
- C. Mental events are the only reality
- D. Physical events are the only reality
- 6. The metaphorical comparison between light and the tide in lines 76-81 is best paraphrased as which of the following?
- F. Just as the light of memories fades over time, so the tide will eventually return waters to the sea
- G. Just as the light fades throughout the day, so the tide will provide new life at night
- H. Just as light disappears over time, so the tide will disappear when it hits the land
- J. Just as the light of memories can clearly be seen, so too is the ocean clear when the tide comes in
- 7. In line 64, to what do the words "desolate zeroes" refer?
- A. Numbers in the night sky
- B. The glow of the rotating Ferris wheel
- C. The shapes of the incandescent bulbs
- D. The white-hot glow of furnaces

- 8. How might we infer that the "starlight" referred to in lines 75-76 most like the narrator's memory of Mercer?
- F. It can still be perceived although it is not there
- G. It is extremely far away in both time and distance
- H. The initial source of the light and memory is extremely beautiful
- J. Perception of both is easiest at night time
- 9. Throughout the passage, scientific analogies to which of the following scientific fields are most prevalent?
- A. Chemistry
- B. Biology
- C. Physics
- D. Geology
- 10. As it is used in line 43, what does the word "mad" most nearly mean?
- F. Angry
- G. Psychotic
- H. Annoyed
- J. Irrational

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#### **SOCIAL SCIENCE:** Status and Statistics

In the scholarly debate of gender and class in Renaissance Italy, the writings of historian Samuel K. Cohn Jr. maintain that Italian women—especially those of the lower classes—experienced a palpable decline in status from the late fourteenth century until the Counter-Reformation visitations of the 1570s. Cohn's 60 essays are distinct from his contemporaries in that they bespeak a darker and rarely mentioned side of the Renaissance. In particular, the broadly encompassing scope of his essays is an attempt to investigate populations as a whole, rather than focusing solely on elites, which, according to Cohn, "has been, with few exceptions, the tendency of women's Renaissance history since the 1970s."

15 Cohn, of course, was not the first historian to investigate the change in women's status during this period. He takes Joan Kelly's famous article "Did Women have a Renaissance?" as a jumping-off point for his own research. However, while Kelly's article 20 draws evidence largely from literature, and pertains primarily to the status of aristocratic women, Cohn's 75 methods of research emphasize the value of statistical data, particularly those derived from the surviving court records, wills, and donation records of Italian city-states. At the time his essays were composed, individual case studies drawn from legal briefs or welltold stories were fast acquiring greater credibility with historical audiences than wages series or ratios of criminal indictment. In the words of one critic, "Measurement was out, and representation was in". Cohn views these popular case-study sources—dubbed "microhistories"—as possessing, irreconcilable social biases, and feels they provide only a limited glimpse at life in a given society. To construct more accurately a portrayal of life in Renaissance Italy for women, the full breadth of society must be examined comprehensively.

Using statistical data, Cohn identifies the fall of the number of women participating in criminal 40 tribunals as an indication of women's decline in status both in the court, and on the street. According to Florentine records between the end of the fourteenth century and the middle of the fifteenth, the number of women participating in these tribunals dropped by 84 percent. The implications of this backslide are significant. By 1450, the power of women to defend themselves in court had suffered a significant blow. And while weakness in the courtroom may not have significantly impacted the elite women of the upper 50 classes, its effects were undoubtedly felt by working women of the lower classes, who were, by the late 1460s, more or less at the mercy of their accusers.

However, not everyone in Cohn's audience is convinced. Historiographer Jacob Burkhardt, pointing to conventional case-study evidence, such as the salons of the upper classes, believes that the Italian Renaissance was a unique time when women were on equal social footing with men, and that this equality was brought sharply to an end only by the onset of the Counter-Reformation. Cohn's detractors have also pointed out instances in which his statistical data appears to be misrepresented in order to bolster his thesis. In particular, as evidence toward worsening gender divisions, Cohn describes instances in which women were accused of infanticide, highlighting that the "majority"—approximately 65 percent—of the victims in such cases were male. Not only is 65 percent a statistically insignificant distribution, Cohn's reasoning seems to make a somewhat irrational leap in this case. Had the number of male victims of infanticide risen to 90 percent, it still would not constitute sound evidence of a decline in women's social status.

While Cohn's occasional manipulation of data must be taken into account with respect to his own thesis, his fundamental methods—namely, research and analysis of the numerical data surviving from a given society—will continue to be of great value in scholarly debates. In order to reconstruct the most complete image of a historical period, it is necessary to address the changing conditions in all areas of the social strata. This would involve a synthesis of the preferred, highly detailed case-study sources, as well as statistical interpretations of legal, economic and governmental records, such as those examined by Cohn. Together, the case-study can produce vivid, historical textures existing within one pocket of society, while concurrent statistical data can help to provide us with the broader social context surrounding and encompassing that texture.

- 11. We can infer that one of Cohn's contemporaries, as discussed in the passage, would likely NOT have written an article by which of the following titles?
- A. The Mona Lisa the story of the world's most famous painting
- B. *Michelangelo A brief biography of the* quintessential Renaissance artist
- $\hat{C}$ . King Francis I an analysis of the decisions of France's first Renaissance King
- D. The Underclass who were the poor in Renaissance London?

- 12. The tone of the passage can best be described as which of the following?
- F. formal and condescending
- G. serious and subjective
- H. objective and balanced
- J. ironic and pedantic
- 13. In Paragraph 2 (lines 15-37) what does the author suggest is the clearest relationship between researchers Cohn and Kelly?
- A. Kelly inspired Cohn, yet Cohn disagrees with Kelly's approach
- B. Kelly taught Cohn, and Cohn is one of Kelly's strongest adherents
- C. Kelly disagrees with Cohn on the type of historical topics worth investigating
- D. Cohn agrees with Kelly on the historical topics of interest, and continues her approach with his research
- 14. Which of the following would NOT reinforce the scholarly tendency outlined in lines 9-14 in popular culture?
- F. A book about the Queens of England
- G. A film about how aristocrats responded during the Hundred Years War
- H. A television program that chronicled the lives of the servants to Queen Elizabeth
- J. A magazine article about how Popes and church leaders confronted the Reformation
- 15. Assuming that all of the choices are true, which of the following makes Cohn's approach to historical research in his area of interest more challenging?
- A. The lack of reliable quantitative data from the Renaissance Era
- B. The lack of accurate primary source personal accounts of historical episodes
- C. The lack of precise military statistics from Renaissance battles
- D. The lack of female historians in society during the Renaissance Era
- 16. What is the author's purpose in mentioning "wages series or ratios of criminal indictment" in lines 28-29?
- F. To provide examples of the type of information that historians found less credible
- G. To provide examples of the types of stories that readers found uninteresting
- H. To contrast historical and economic research
- J. To give instances of biased historical primary sources

- 17. The author of the passage would most likely advocate an approach to history that was:
- A. Quantitative and focused
- B. Personal and interpretive
- C. Comprehensive and balanced
- D. Qualitative and contemporary
- 18. Based on lines 70-73, why might we infer that the author considers statistics about male infanticide (i.e. the killing of young male babies) to be of little help in drawing conclusions about the social status of women?
- F. Percentages of infanticide victims who were male gives us no information about the percentage who were female
- G. This information gives us little idea of how adultage women were treated in society, which is the primary objective of the researcher
- H. A 90% trend is clearly just as statistically insignificant as a 65% trend, according to the passage
- J. Much like all of Cohn's historical research, this information is based on his irrationality
- 19. Based on information in the passage, what type of historical source would someone writing a microhistory most prefer?
- A. A small painting of a Noble
- B. A collection of correspondence
- C. A statistical summary of deaths from the Plague
- D. A summary of legal theories in the Renaissance
- 20. What is the main idea of the last paragraph (lines 74-90)?
- F. That statistical and case-study approaches should be comprehensively synthesized to make for the best possible historical analyses
- G. That both statistics and case-study approaches are fundamentally flawed, and a better understanding of social context should be attained
- H. That while Cohn's approach has its merits, the case study approach with its more balanced analysis is a more rigorous option
- J. Historians will be unable to improve upon the works of Cohn and his contemporaries due to the lack of reliable historical information

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#### **HUMANITIES:** Who's got the Blues?

From Louisiana to the Midwest and everywhere 55 in between, there's perhaps no musical genre more quintessentially American than the blues. Like barbecue and blue jeans, the blues has acquired an iconic status in American popular culture, and bearing the names of the regions in which they flourished, the branches of blues music exist in as many permutations. But from the delta blues, to the Chicago blues, to the more recent Texas blues, American blues music demonstrates a remarkable conservation of structure and motif across all its divergent incarnations. Dig a little deeper and you'll find the influence of the blues not only interwoven throughout the whole evolution of rock 'n roll, but still firmly embedded in popular music today. However, for all its intimate history with American culture, it is important to realize that a stunning majority of what makes the blues "bluesy" originated not in Texas. Chicago or even on the Mississippi delta, but arrived in America with the slaves captured from West Africa.

Unlike its close relative, jazz, which has undergone unprecedented structural reinvention and heterogenesis in its lifetime, blues music has managed in spite of its similarly considerable longevity to retain several pervasive musical hallmarks. This, perhaps more than anything else, divides jazz and blues on the issue of ancestry. For while artistic mutation has obscured the early history of jazz, and caused the list of its suggested precursors to include not only African American spirituals but also Spanish flamenco and Provencal folk music, the comparatively wellpreserved precepts of blues music are unequivocal evidence of a West African origin.

Among the most significant offspring of these 35 musical forerunners are the distinctive scales used in blues. A blues scale—like many folk music scales follows a pentatonic progression, but includes several unique, flattened notes; specifically the third, fifth and seventh. The inclusion of these flattened notes in the 40 scale is, in itself, so iconic and exemplary of blues music that they are often referred to as "the blue notes". In effect, the blue notes impart a minor key tonality to a major key tune. In the Western musical tradition, such an arrangement is described as 45 "dissonance", and seldom appears in European folk music. However, blue notes were and continue to be used extensively in traditional singing throughout regions of West and Central Africa, and are particularly prevalent in the Jola tribe's playing of "Akontings"—a stringed West African folk-instrument which, incidentally, is also thought to be a forebear of the American banjo.

Another remnant of the blues' African heritage survives in the structure of its vocal and lyrical components. Traditionally, a single verse of blues lyrics consists of one line repeated twice over mutually inverse chord changes, followed by a third, rhyming line that resolves the frame. Although this form cannot be said to have been extracted directly from traditional African music, its lineage is consistently traced back to the "work songs" used by African laborers. According to popular music expert Dr. Reebee Garofalo, these early predecessors to the blues were not so much music for the sake of music as they were a "functional expression, rendered in a call-and-response style without accompaniment or harmony and unbounded by the formality of any particular musical structure". The transformation of the amorphous and irregular African work songs into the more tightly regulated blues form we know today is thought, perhaps, to have occurred due to the intermixing of Western folk music with the songs of African American slaves. Indeed, by the first half of the twentieth century the blues had become so fixed in lyrical anatomy that one might recognize the structure of several lines from a Billie Holiday song, "My man don't love me, treats me awful mean / Oh, he's the lowest man I've ever seen," as iambic pentameter.

The incubation of blues music began with the first arrival of West African slaves in America, and through the revolution and the emergence of the United States, to the abolition of slavery and onward, the blues continued to evolve and proliferate, taking on new forms, instrumentations and significance. And although today the blues may seem as American as apple pie, we mustn't forget the creative debt this most American of musical genres owes to its West African ancestors.

- 21. What likely assumption on the part of his readers is the author attempting to overcome in the passage as a whole?
- A. That blues are not high quality music
- B. That the blues are as American as apple pie
- C. That Blues are purely American in origin
- D. That the blues are a key part of American popular culture
- 22. In line 74, the word "fixed" most nearly means:
- F. established
- G. repaired
- H. supplied
- j. prearranged

- 23. Which of the following situations is most similar to the relationship between the "Akotings" mentioned in line 49 and a banjo?
- A. The American-invented telephone that was later adapted to the cellular phone thanks to later American inventors
- B. The German-invented Frankfurter that was later adapted to the Hot Dog by American culture thanks to German immigrants
- C. The German invention of calculus that was simultaneously invented by English mathematicians
- D. The Japanese manufacture of electronic devices that were adapted from American inventions in the post-World War II environment
- 24. According to the passage, the culture of which of these geographical regions made the most significant contributions to the creation of blues music?
- F. Texas
- G. Chicago
- H. Mississippi Delta
- J. West Africa
- 25. What is the author's purpose in mentioning Dr. Reebee Garofalo in line 62?
- A. To provide the backing of an authority to justify his argument in the fourth paragraph
- B. To appeal to a scholar who has clearly stated how he agrees with the thesis of the passage as a whole
- C. To give the testimony of a person who has had to perform African work songs as a laborer
- D. To show how a modern---day musician continues to be influenced by West---African cultural contributions
- 26. We can infer from the passage that which of the following would NOT need to be relatively consistent across songs characterized as blues?
- F. Lyrical Structure
- G. Musical scales used
- H. Combination of dissonance in the tonality.
- J. Musical instruments utilized

- 27. Which of the following would most likely be an example of "music for the sake of music" at the term is used in line 63?
- A. A national anthem
- B. A school fight song
- C. A modern symphony
- D. A love song duet
- 28. According to the second paragraph (lines 21-33), what is the major difference between jazz and the blues?
- F. The longevity they have had in America
- G. The consistency of their styles over time
- H. Whether they had any foreign influence
- J. Their popularity in modern-day society
- 29. The term "iambic pentameter" in lines 77-78 is used by the author to illustrate:
- A. The structure of blues music across history
- B. The incubation of blues music in West Africa
- C. The impact of Western culture on the blues
- D. An example of an amorphous work song
- 30. Which the following best describes the tone of the passage as a whole?
- F. Reasoned persuasion
- G. Impassioned argument
- H. Scholarly detachment
- J. Impersonal indifference

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#### NATURAL SCIENCE: Ready, Set, Glow.

If you've ever been in the central or eastern U.S. around dusk in late summer, you've probably witnessed a peculiar biological phenomenon—all around long, languorous insects begin to appear, with abdomens emitting a flickering, yellow-green glow. 5 These insects, commonly known as "fireflies" or "lightning bugs", produce their glow in a process called bioluminescence. Although the firefly is perhaps the most familiar species that emits its own light, bioluminescence has been discovered in varieties of fungi, fish, coral, squid, and even a bacterium that lives in elephant mucus. There are, in fact, more than thirty known, independent occurrences of bioluminescence in evolution, and while no two species seem to use their light in precisely the same way, they all share a few unique, fundamental processes that give them their special glow.

Though there is considerable variation among the cell-signaling pathways of different bioluminescent life-forms, all involve an enzyme called luciferase, which catalyzes the reaction of its light-emitting substrate, luciferin, and adenosine triphosphate (ATP), which is an energy-storing compound used widely in both plant and animal cells. Molecular oxygen (O<sub>2</sub>) is also peripherally involved in the reaction. This method of light-production is a naturally occurring type of chemiluminescence, where electromagnetic radiation is given off in a chemical reaction by the return of electrons from energetically excited states to their ground state in the form of visible light.

What's more, luminescence is fundamentally distinct from the way we create light in incandescent light bulbs. Incandescence uses the super-heating of a filament to generate light by thermal radiation, and a lot of energy is wasted in the process. In contrast, less than 20% of luminescent light is created by thermal radiation, which has earned it the nick-name "cold light". This detail is of particular importance to bioluminescent species, as it guards against the generation of excess heat, which would cause an unnecessary expenditure of energy, and may interrupt the species' homeostatic equilibrium.

Perhaps equally remarkable to a species' ability to luminesce is its ability to regulate when and for how long light will be emitted. Fireflies, for instance, which use their glow as a signal to attract a mate, emit light only for a brief duration of time, but alternate between "on" and "off" with a fairly high frequency. This is accomplished, biologists believe, by the quick molecular decay of nitric oxide. Near their luminescent organs, or "lanterns", fireflies possess cells containing

the enzyme nitric oxide synthase, which separates nitric oxide gas (NO) from the amino acid arginine. A nerve impulse stimulates the release of NO from these cells, which then passively diffuses into the adjacent lantern cells, where it temporarily blocks mitochondrial respiration. With the lantern cells' respiration inhibited, its oxygen content begins to climb. This increase in oxygen triggers the light-producing reaction inside peroxisome organelles, which contain the key compounds luciferase and luciferin-ATP. When the nerve impulse stops, NO no longer enters the lantern cells, and the remaining NO is quickly degraded by enzymes. This allows cellular respiration to resume in the mitochondria, returning oxygen to its normal level, and in turn deactivating the peroxisome light-reaction.

Although the signaling pathway for light production in fireflies is complex enough, the methods by which different species regulate their luminescence is as various as the uses for luminescence that those species employ. As we have seen, fireflies tend to use their light to attract a mate, but females of one large species of firefly have been known to mimic the glow pattern of another, smaller variety, in order to attract males of the smaller species and eat them. Similarly, the deep-sea dwelling anglerfish uses its glowing appendage to lure in unsuspecting prey. Other marine animals use bioluminescence as a defense mechanism. Certain crustaceans, for instance, expel a glowing liquid similar to the way many squid use ink, surprising and disorienting their potential predators. For many bioluminescent life-forms, such as fungi, the purpose of their light-emitting properties remains a mystery. However, it's said that Benjamin Franklin suggested the use of foxfire (bioluminescent fungi) as a viable light source on an early variety of submarine, as it would consume considerably less oxygen than the combustion reactions of candle or lamplight.

Despite the great diversity of uses for bioluminescence in the plant, animal and fungi kingdoms, and the wide evolutionary divides between the species that possess such properties, it is an unprecedented parallelism that all should have developed the use of the same fundamental compounds for their light-emitting processes, and one that garners continued fascination, both from the biologists working in their laboratories, and from the rest of us, watching the fireflies flicker in the late summer night.

- 31. What is the purpose of the passage?
- A. Explain a phenomenon
- B. Analyze an approach
- C. Discuss an argument
- D. Investigate a theory
- 32. What is the function of the quotation marks around the words "fireflies" and "lightning bugs" in lines 6-7?
- F. To describe the light sources, such as fire and light, that bioluminescent creatures utilize
- G. To provide a quotation from a biologist about bioluminescent animals
- H. To analyze the origins of the phenomenon of bioluminescence
- J. To illustrate the common names of bioluminescent insects to the reader
- 33. According to the passage, which of the following represents (an) environment(s) in which bioluminescent creatures have been located?
- A. Water only
- B. Air only
- C. Water and air only
- D. Land, sea and air
- 34. We can infer from the passage that the author believes that bioluminescence evolved:
- F. As a result of a common ancestor
- G. Independently due to environmental needs
- H. Similarly due to requirements to combat nighttime darkness
- J. For the purposes of mating
- 35. According to the third paragraph (lines 31-42), what is different in the outcomes of the processes of bioluminescence vs. incandescence?
- A. 20% more energy is utilized
- B. The use of thermal radiation
- C. Whether light is created
- D. Amount of heat wasted

- 36. We can infer from the passage that a situation in which human utilization of bioluminescent technology would be most useful would most likely be which of the following?
- F. To minimize oxygen use and minimize heat generation
- G. To maximize oxygen use and minimize heat generation
- H. To minimize oxygen use and maximize heat generation
- J. To maximize oxygen use and maximize heat generation
- 37. According to the fourth paragraph (lines 43-66), the shift in levels of which of the following substances is most responsible for the chemical reaction that creates light?
- A. Nitric Oxide Gas
- B. ATP
- C. Oxygen
- D. Arginine
- 38. Based on the information in the passage, which of the following is NOT a biological purpose of bioluminescence?
- F. Mating
- G. Catching food
- H. Protection
- J. Respiration
- 39. Based on the information in the fourth paragraph (lines 43-66), the process by which nitric oxide goes through molecular decay is most important to the firefly mating process due to which of the following characteristics?
- A. Its speed
- B. Its frequency
- C. Its luminescence
- D. Its energy
- 40. What may we infer is a reason the author states that "the firefly is perhaps the most familiar species that emits its own light" in lines 8-9?
- F. Its relatively large size
- G. The ease with which it is observed
- H. The number of species categorized as such
- J. Its unique manifestation of glowing light

# Key:

1. B	11. D	21. C	31. A
2. H	12. H	22. F	32. J
3. D	13. A	23. B	33. D
4. H	14. H	24. J	34. G
5. B	15. A	25. A	35. D
6. F	16. F	26. J	36. F
7. B	17. C	27. C	37. C
8. F	18. G	28. G	38. J
9. C	19. B	29. C	39. A
10. J	20. F	30. F	40. G