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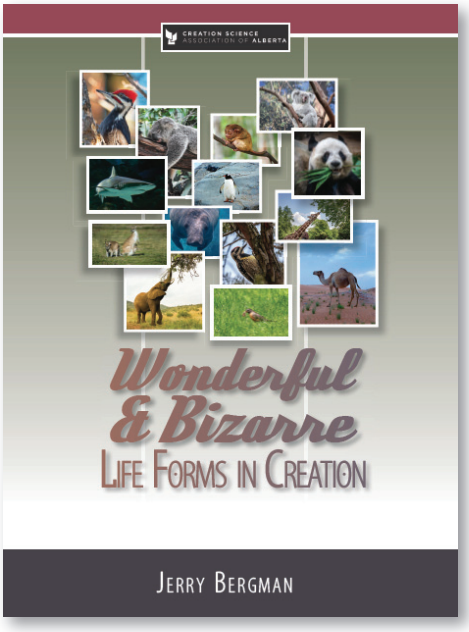
Wonderful
New Book from Dr. Jerry Bergman

by Moxie

Dr. Jerry Bergman, who needs no introduction to readers of *Dialogue*, is the author of a delightful new book for families and animal-lovers and all who enjoy fascinating details from nature. Readers of *Dialogue*, for more than fifteen years, have been blessed with little known insights into some well-known creatures. His new book *Wonderful and Bizarre Life Forms and Creation* is a collection of the "best of Bergman" from *Dialogue* plus a few completely new chapters. The twenty-three chapters present each creature with pictures and highlights. This is an attractive and well documented book in full colour, which will inspire much reflection and discussion. Many will want to buy several copies, one for personal use, and others for those special people in their lives!



Among scientists who communicate extensively about creation, Dr. Bergman stands out as a most remarkable individual. As a bright young lad, he became interested in astronomy, biology and chemistry from his atheistic but academically inclined father. His mother was religious, but a member of a group hostile to Christians. Over

many years, Jerry studied and rejected his mother's religion. He then turned to his father's atheism. In support of this position he read large amounts of the mainstream scientific literature on evolution. Eventually he found the scientific literature on evolution did not explain what we see in nature.

He then sought information on Islam, Judaism and Christianity in order to find out who the Creator might be. Soon he became convinced that it was the Bible that provides the truth about creation, the Creator and salvation, and he became a Christian. This past experience of voracious reading, his many academic degrees and bright mind (he is a member of Mensa) explain why he is so passionate about Creation and so interested in such a wide variety of scientific disciplines.

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David Coppedge Headlines

Creation Weekend 2020

Creation Science Association of Albert is delighted to present David Coppedge as the featured speaker for our Creation Weekend 2020. Due to COVID 19 restrictions, Creation Weekend will be a one evening online event this year. David Coppedge was exceptionally well received with his presentations in Edmonton in 2012. Now in 2020, his return promises another interesting presentation entitled *Creation is Awe Inspiring!* **Everyone is encouraged to register on our link at www.create.ab.ca/register. Once you register, you will be sent details for the Friday evening, October 23, 2020 presentation at 7:30 p.m.** Closer to the event you will receive an email with further details.

David Coppedge was Team Lead Administrator for nine of the years 1997-2011, when he worked for Jet Propulsion Laboratory in California as a system administrator for NASA's Cassini Mission to Saturn. This was a highly exciting time to be involved in the exploration of space and Saturn is perhaps the most exciting planet to study with its systems of rings and moons.

Continued of page 2

David Coppedge Headlines

Creation Weekend 2020

Continued from page 1

Also, in the year 2000, David Coppedge founded Creation Evolution Headlines, an on-line source of daily informed commentary on current articles in scientific journals. His website averages about 15,000 hits per month. In addition, more than thirty-five years ago he founded Creation Safaris, an outreach ministry with the objective of helping young people (and others) to consider God's plan (as revealed in the Bible) as these participants experience some unique and amazing wilderness areas in the American west.

But that is not all! David Coppedge is also on the board of directors of Illustra Media which has produced such amazing DVDs as *Privileged Planet, Living Waters,* and *Metamorphosis.*

For recreation, when he has time, David Coppedge composes music. He dedicated his *Apollo March* (premiered by the US Air Force Band Golden West on the fiftieth anniversary of the Apollo 11 landing on the moon) to friend Dr. Henry Richter. Dr. Richter is famous for having headed development of the free world's first successfully launched satellite Explorer I in 1957. More recently Dr. Richter and David Coppedge collaborated on a book on creation entitled *Spaceship Earth* (published by Creation Ministries International).

It is obvious that Creation Weekend on October 23, 2020 is a great opportunity to learn yet again from this talented specialist in the creation, especially in nature, and space. Be sure to sign up for this on-line presentation! It does not cost you anything. And encourage your friends to sign up too! Let us all enjoy his presentation together!

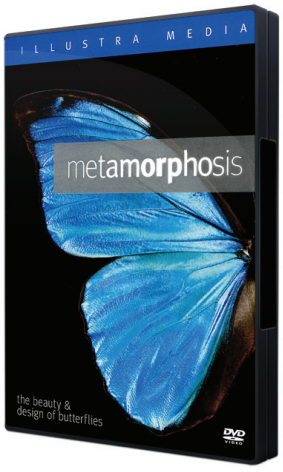
First class resources for FREE!

One family, with one child in high school, one in junior high and one in elementary school, were going to start with just one video clip from Michael Behe. The idea was, like the thin edge of the wedge, to first catch their attention. But everyone was so intrigued, that they watched all five episodes in one sitting!

To access this series, google Michaelbehe.com and click on Secrets of the Cell. This takes you to the videos with links to all five episodes. Each 4 – 8 minute episode provides insights on some intriguing discovery in science. The titles of the episodes are as follows: Someone must have the answer; the complexity of Life; the power of evolution (actually this episode demonstrates that it is not evolution but design which brings about purpose and planning in biology; the effects of mutation; and the X factor of life. Viewers will find that the visual effects are amazing. Not only do we see beautiful animals, but we also see intricate animated illustrations of molecular machines operating in the living cell. Michael Behe's discussion is not only interesting, but full of humour.

Once your family is excited about discussions of origins, you cannot go wrong by showing them an eleven-minute discussion displaying the impossibility of even beginning a spontaneous origin of life. Google the john1010project.com/first-life.html Again the visual effects are wonderful and the discussion is clear and interesting.

The John 10:10 Project was founded by the same people who developed Illustra Media, the producers of such wonderful DVDs as *Metamorphosis*. The films on the John 10:10 website are produced to nurture a deeper understanding of God. Their videos are freely available for viewing on-line. Expect the same amazing visual quality as in the Illustra Media titles. For topics from science, click on Awesome Wonder.



Dialogue

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by Joanna Bain

Exploring the World of Astronomy

I am 12 years old and I am interested in astronomy. Exploring the World of Astronomy by John Hudson Tiner is a well written book about astronomy from a Christian perspective. I learned through reading this book that it is well formatted, the information is easy to apply to the real world, and that many people will enjoy this book.

This book was well written and well designed for learning, as you can see in the format and content of the book. I appreciate that to find out about a certain topic, all I have to do is look in the table of contents and it tells the different chapter names and page numbers. This was helpful when I wanted to learn about telescopes before reading the book cover to cover. As well, at the start of each chapter there are important questions listed to the side on a clipboard image. This helps the reader to focus on important details as they read the chapter. Pictures of different planets, telescopes, and diagrams really helped me understand what the author was explaining. There are questions at the end of each chapter, and an answer guide at the end of the book, which makes it easy to see what you learned throughout the chapter.

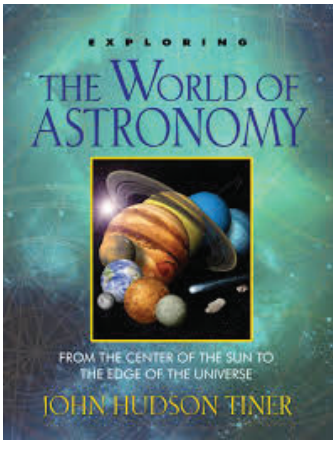
One of my favourite things about this book is how I could apply it to real life. For example, in my favourite chapter, the chapter on Saturn, I learned that scientists such as Galileo originally thought that Saturn's rings were not rings, but that Saturn was a really weird shape like a sphere with two fuzzy blobs on either side like handles (chapter 5 pg. 55). The telescopes that Galileo used weren't powerful enough to see the shape of Saturn clearly. The book says that Saturn can be spotted with an amateur telescope. When I spotted Saturn and looked at it through my telescope I could not see the space between Saturn and its rings until I changed the lens to a higher power lens. Then I could clearly see the space between Saturn and it's ring. That was amazing to see! In each chapter the author talks about what can be spotted with the unaided eye, or with an amateur telescope.

For example, in the chapter on the moon the book talks about the things you can see with the unaided eyes and how to spot the different craters on the moon (chapter 1 pg.7 and 8). At the end of each chapter there is an Explore More section which has some activities you can do like researching something that you learned about in that chapter. I find when I read something and then apply it to life, I remember that fact longer, so this is really helpful.

Is this book right for you? Exploring the World of Astronomy is an outstanding book that is great for kids ages 10-14. For kids who want an introduction to astronomy this is a perfect starting point to this topic. For those who are already interested in astronomy there is so much more to learn in this book. There are new things to discover in every chapter! When I was reading this book alongside one of my parents, they were also learning a lot. Although this book is best for readers 10-14, readers of all ages can enjoy it, too!

Exploring the World of Astronomy is organized in an easy to understand format, applies to real life, and is an enjoyable read. I highly recommend this book!

Paperback, 171 pages, black and white illustrations, $15.00



Something special about Bumblebees

by Margaret Helder

An interesting article appeared recently in the journal *Science* that suggested that bumble bees have solved a problem that plant physiologists have been working on for one hundred years! It was in 1920 that plant physiologists Wightman W. Garner (1875-1956) and Harry A. Allard (1880-1963), while working with tobacco and flowering cosmos, discovered that the correct length of day is essential for the onset of flowering in these plants. They named the phenomenon "photoperiodism," and it is an extremely important control on the beginning of the flowering process in many plants.

Our ability to control the onset of flowering has not progressed much beyond the discovery of photoperiodism. In a review article, Fui-Ching Tan and Steve M Swain (*Physiologia Plantarum* 128:8-17. 2006) confide that "Initiation of flowering is a highly regulated process, which involves temporal and spatial interactions between external and internal factors. External signals that are pertinent to the flowering process include day length (in fact the length of the night) and temperature. These together with endogenous factors, such as developmental stage and floral gene activities, act to promote flower initiation." (p. 9) To this day, greenhouse growers use expensive automated blackout shading to promote flowering in short day plants like chrysanthemums.

For more than seventy years, plant physiologists have speculated that a mysterious hormone (called florigen) is synthesized in the leaves under environmental conditions that are appropriate to the specific plant species. Part of the story is that this hormone then moves upward through the phloem to the growing stem tip (apical meristem). A meristem is like human stem cells. The cells of the meristem can divide indefinitely, and some of the daughter cells stay as meristem, and some mature into other specific tissues. Upon arrival in the apical meristem cells, florigen somehow encourages the production of flowers rather than leaves from the growing tip. In some ways it seemed as if florigen was like the "tooth fairy," a useful fiction. But guess what! Florigen actually exists and its impact on meristems is exciting and complex.

A review article by Hiroyuki Tsuji on the molecular function of florigen (*Breeding Science* 67: 327-332. 2017) began with the news that in 2007 "the molecular nature of florigen was revealed as the protein product encoded by the *Flowering Locus* (*FT*) genes in plants." (p. 327). Under the appropriate environmental conditions, cells in the leaf synthesize florigen, a small globular protein. As previously expected, this molecule is transported up to the growing stem tip. In these cells, the florigen combines with a receptor protein called 14-3-3 to form a complex which moves into the nucleus {control centre] of each cell. There the complex combines with another protein (transfer factor) to form the florigen activation centre (FAC) which attaches to the DNA at the appropriate point to promote the expression of genes which initiate the development of flowers. Wow! Scientists now hope that this information will enable them to speed up the onset of flowering in crop plants like rice.

But what has all this to do with bumblebees? An article out of Switzerland, printed in the journal *Science* (F. G. Pashalidou *et al. Science* 368: 881-884. 2020), tells an interesting story. The title is "Bumble bees damage plant leaves and accelerate flower production when pollen is scarce." Exactly how do the bees speed up flowering? What do they know that we do not know? According to the article, there are some occasions early in the spring, when bumblebee colonies find themselves very hungry for lack of pollen to eat from flowers. On such occasions, scientists have observed that the bees go from plant to plant, using their mouth parts to poke holes in the leaves. Since the bees did not seem to be obtaining any nutrients from this process, scientists set up some experiments to find out what was going on.

On a roof garden, scientists provided hungry bees with young *Brassica nigra* (black mustard) plants and *Solanum lycopersicum* (tomato) plants. The study revealed, to everyone's surprise, that the acceleration of flowering by bee-inflicted leaf damage was "substantial." Thus they reported: "in *S. lycopersicum* [tomato], the average flowering time of bee-damaged plants was 30 days earlier than that of undamaged plants and 25 days earlier than that of [human] mechanically damaged plants. In *B. nigra* [black mustard], the same comparisons yielded differences of 16 and 8 days, respectively." (p. 881) To confirm these results they conducted further extensive studies involving two roof gardens, various combinations of plant choices for the bees, and some observations of wild bees as well.

The difficult question for evolutionists is how do bees manage what people cannot (to speed up the onset of flowering), and how did the bees figure out how to achieve this anyway? A commentary from a bee expert in the same issue of *Science* (pp; 824-825) suggested that: "One possibility is that individual bees figured out that leaf-biting results in future rewards, and that these bees remember the very plants they have damaged." (p. 825) However few worker bees would survive long enough to benefit. Dr. Chittka further muses: "One might wonder why bees would bite holes in vegetative parts of plants that do not even have flowers." Admitting himself at a loss to explain all this in evolutionary terms, he expresses the hope that future studies will develop a "plausible evolutionary scenario" for the situation. As to why the bees' activities have any impact on flower initiation, he suggests that "An adaptive explanation might be that plants 'want' to respond to bees that are signalling a dearth of food." Farmers sometimes want early flowering too, but it doesn't do them a lot of good.

The whole situation reminds us that there are many instances in nature of amazing behaviour patterns among creatures such as insects. Could such talents have developed spontaneously through evolutionary processes? Obviously short-lived creatures like bumblebees cannot adopt a behaviour with no obvious benefit. It has to be programmed into them. We see planning and purpose in all this, the conferring on these insects of an amazing ability to manipulate a complex process in plant physiology that no one else knows how to achieve. What a gift to the species. What an amazing creation!

There are amazing behaviour patterns in insects

How COVID created opportunities!

by Margaret Helder

The media are full of accounts of how people have used their unexpected "down time" at home during the COVID pandemic. What we chose, be it bread baking or house-cleaning or crafts or whatever, obviously reflected personal preference. As far as I was concerned, this time was a golden opportunity to do some extra scientific reading. It all began with an article in *Nature* that promoted an ancestral relationship for red seaweeds with an organism that was the exact opposite of all the features in red seaweeds. Perhaps I lack imagination but I could not believe that this prestigious journal had indeed published such an argument. It seemed hilarious to me.

So, I began to research the relevant scientific literature. The reasons for the evolutionary argument came from the popular endosymbiotic theory for the origin of chloroplasts (plastids) in plant cells. However actual observations in the seaweeds and the "sister" organism did not fit the argument. I greatly enjoyed writing the article which admittedly was a little more technical than most of my recent work. The next question was who might be willing to publish this material?

CSAA provides a link to the website *Creation Evolution Headlines.* David Coppedge, its founder and editor, provides almost daily commentary on current scientific articles. The website has been functioning for 20 years and currently receives about 15,000 hits per month. Some of the discussion is technical and some is more light hearted. But it is always interesting and helpful for understanding the issues involved. I wondered whether this website might be interested in my article. Upon inquiry, David Coppedge graciously agreed to look at the item. Later he agreed to post it to his website. It duly appeared on February 10, 2020 under the title "Bad News for Plant Origins" (To find an ancestor for plant photosynthesis in red algae, evolutionists have to imagine a series of spectacularly improbable events.)

Well, you know how one thing leads to another. It so happened that an article appeared about this time in the scientific literature claiming that a recent fossil discovery could be a green alga ancestral to land plants. Some of the references that I had read for the first article turned out to be relevant to this topic including an October 31 cover story in *Nature* on evolutionary relationships in plants. Obviously, I could not resist doing the reading on that topic as well! And thus on March 13 my article "Flip Flops in Plant Ancestry" was posted to *Creation Evolution Headlines*.

By now COVID regulations were upon us and everyone was stuck at home. Naturally my thoughts turned to further claims in the *Nature* cover story on plant ancestry. Because of my interest in green algae and in mosses and liverworts (land plants with some unusual characteristics), I carried out yet more research and on March 27 and on March 30, there appeared parts I and II of "Plant Ancestry: Where are the Lines of Descent?" (How major differences in land plants pose challenges to evolutionary ancestry.) If you have ever longed to learn more about mosses and liverworts, these are the articles for you!

Another article in *Nature* which appeared at the end of March 2020, turned my thoughts in an entirely different direction. During the summer of 2004, my husband and I had visited the museum at Miguasha, Quebec where we learned about an amazing catastrophic deposit of fish and plant fossils. Many of the fish were buried whole, and some had their insides burst from the pressure. The tour guide emphasized that one fish species from the museum had long been considered ancestral to all four-footed animals. However, some other fish from elsewhere had more recently usurped this claim to fame.

Nevertheless, there were fossil remains at this site which might yet trump all the other claims to closest ancestor to the tetrapods. The name of this possible candidate for the ancestral title was *Elpistostege.* Well, here was a new article claiming priority for this very species! I could hardly avoid researching the merits of the claims of this specimen to fame. As it happens, I had some excellent resource material from Miguasha and I found more on-line. Thus on May 11 and May 12 *CEH* posted "Latest Tetrapod Ancestor Can't Stand Up" and "Previous Ancestors Fell Flat too" (These articles examine the latest candidate fossil for ancestor to all land vertebrates).

You might think that the fishy fossil article could not possibly be connected to any plant related topics. But you would be wrong. It so happened that also this spring an item appeared in *Current Biology* that made big evolutionary claims for some plant fragments in some chips of rock that had been collected only a few miles from guess where? Actually it was just across the river from Miguasha. You remember that I already mentioned that lots of plant debris was entombed with the fishes at Miguasha? But this new material is considered to lie at lower depths in the rock strata. Anyway, this topic called attention to a lot of articles about land plant origins, many of which studies are based on discoveries in Quebec and nearby New Brunswick. Thus, on June 8 an article appeared "Evolution of Vascular Plants a Kaleidoscope, not a Tree" (It takes effort to rearrange pieces from a kaleidoscope into a tree, but evolutionists do that with the 'evolution' of plants.)

Most recently on June 29, 2020 an article appeared about which all students in post- secondary biology courses should be aware. The topic is endosymbiosis, a most important evolutionary theory. Few people realize the numerous most improbable *ad hoc* assumptions that evolutionists must make to try to accommodate their theory to actual data. See "Diatoms Defy the Evolutionary Endosymbiosis Theory."

The easiest way to access these articles is via www.crev.info/author/mhelder/ To access many other exciting articles on this website, just google *Creation Evolution Headlines*. Many people check the website frequently to see what new topics are covered. The articles span the gamut of scientific disciplines. We really don't need a COVID pandemic to find an excuse to expand our reading and our interests!

For Canadian Maritime articles from *Dialogue* see:`
www.create.ab.ca/maritime-dinosaurs-and-other-fun-fossils/#more-363
www.create.ab.ca/maritime-beaches-their-grim-story/#more-712

Wonderful
New Book from Dr. Jerry Bergman

Continued from page 1

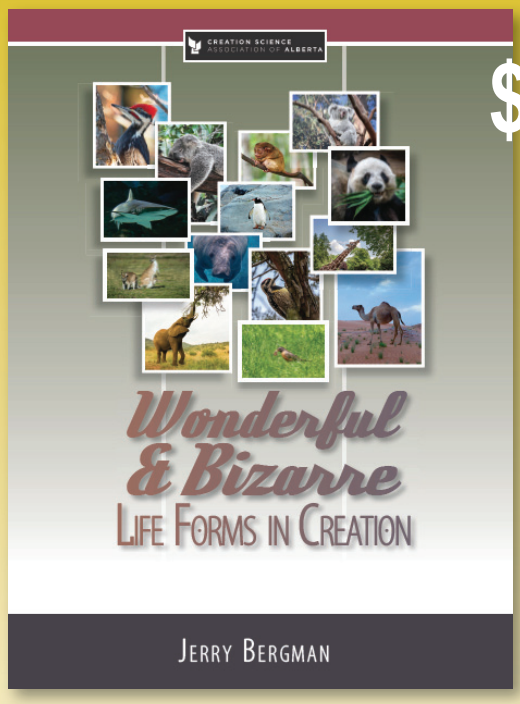
We, in Alberta, saw first-hand Dr. Bergman's broad interests in the fall of 2011 when he was our featured speaker at Creation Weekend that year.

We also see Dr. Bergman's wide-ranging interests in the books that he has researched and authored. The early title *Vestigial Organs are Fully Functional* came from his researches into evolution.

The title *Slaughter of the Dissidents* documents the history of persecution of those who question Darwinism in academia in the United States. *Persuaded by the Evidence* (edited by Doug Sharp and Jerry Bergman) provides personal accounts of how many scientists came to embrace creation. *The Dark Side of Charles Darwin* documents the impact of social Darwinism in recent history. *How Darwinism Corrodes Morality* documents the motives of many individuals who have had a very negative impact on our society based on their atheistic and pro-evolution worldviews. *Evolution's Blunders, Frauds and Forgeries* provides some fascinating accounts of ways in which false conclusions about origins have misled society. These, and many other titles by Dr. Bergman, are all important books for adults, devoted to serious topics. But until now Dr. Bergman has not authored a youth-oriented discussion of the creation.

Dr. Bergman's broad interests in zoology are reflected in his new book. Very few of us display the drive to discover so many fascinating subjects for study and to share this information with others. Included in the line-up are earthworms, octopus and an extinct trilobite, but also fishes, a reptile, birds, and many weird marsupials and ordinary mammals. Most of us are aware that these creatures exist, but we did not realize how interesting they are.

In addition to the fun and interesting details, Dr. Bergman's objective is to communicate some of the interest and variety that we see in the Creation and how all of these details testify, not to an evolutionary origin, but to God the Creator of all things.



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The hardest thing about facts is to face them!

Wonderful and Bizarre Life Forms in Creation

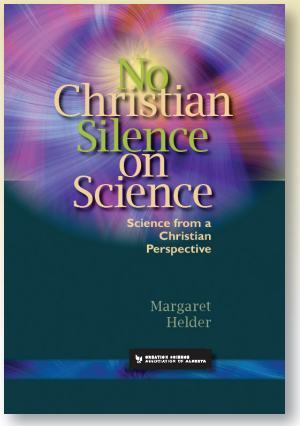
Jerry Bergman

This fascinating new book discusses some remarkable and surprising features of a wide variety of animals. In addition to the interesting details, Dr. Bergman's objective is to communicate some of the interest and variety that we see in the Creation and how these testify, not to an evolutionary origin, but to God, the Creator of all things.

Paperback/138 pages/full colour

No Christian Silence on Science

Margaret Helder



This book shows why and how Christians can benefit from, and enjoy the study of nature. Includes strategies for evaluating mainstream science claims, and fascinating discussion of interesting issues.

And Companion Study Guide: includes key concepts from the discussion, questions and detailed answers, related resources both on-line and hard copy formats, and fun suggestions for extension.

Paperback/116 pages

(also available a Study Guide: Paperback/36 pages $5.00)

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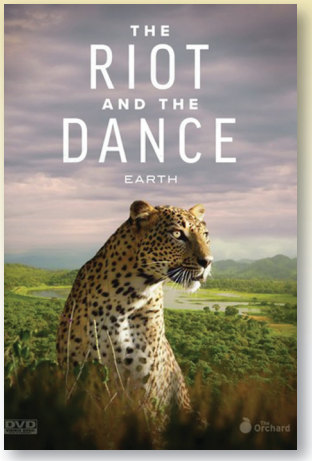

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Ezra Institute: Gorilla Poet Production

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