

The <mark>Wonder of</mark> Boxelder Bugs

A careful examination of objects by both telescopes and microscopes reveals a major contrast between human-constructed objects and those designed by the Creator. Human made objects, such as a watch, reveal *more* imperfections as the magnification by which they are viewed is increased. An old-fashioned gear watch is an object



of beauty when viewed by the naked eye. Under the microscope, though, the flaws in the machining process become more apparent until, under high power, a watch

looks not only imperfect, but crude. In contrast, increasing magnification of the natural world reveals new detail and perfection. This principle is illustrated by an evaluation of the lowly boxelder bugs, the so-called scentless plant bugs. The higher the magnification they are examined under, the greater the evidence of design and perfection. Details of the common boxelder bug, sometimes called boxelder beetle, and all insects show

the greater the image is magnified presents an ever-increasing level of detail and design to the viewer.

Life Cycle of Boxelder Bugs

Because boxelder bugs reproduce primarily on pistillae (female) boxelder trees, they are usually not found unless a boxelder tree, also known in Canada as Manitoba maple, is nearby. The females lay eggs in late April to early May inside of tree bark crevices, grasses, or on the ground near stones for protection. The female plants bear seeds, thus making them a preferable nutritional choice to their male non

seed-bearing counterparts. The eggs hatch after about 15 days and bright red nymphs appear. Boxelder bugs live by sucking sap from leaves and consuming small twigs or

developing seeds (Holm, 1985, p. 22). This usually causes little or no harm to the trees. They do not smell, do not bite, make no noise, do not eat human food and live in out of the way places (Holm, 1985, p. 8).

> Boxelder bugs are usually first noticed in the fall when they migrate from their homes in boxelder trees to heated buildings for protection from

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Making Sense of Turbulent Times

Highly divisive issues are rocking our society today and as Christians, we need insights into where these ideas are coming from, and what they mean for us and our children. There are few issues of greater interest to modern society than the environment. Christians therefore cannot

> allow themselves to remain ignorant on this topic.

> With travel opportunities and wonderful photography from every continent, we cannot fail to be aware of the beauty and diversity in nature. Naturally Christians, like many others, appreciate and value our beautiful sur-

roundings. It is no surprise then, that we hear a lot about the environment. But is the popular message a good one? Journalists, politicians and scientists are promoting big changes to our society in the name of environmental preservation. For example, two individuals from a Canadian think tank dedicated to promoting "climate and social justice", wrote in a recent opinion piece: "The Green New Deal is capturing people's imaginations and reframing the climate debate that builds on a ground swell of support for a major social and economic shift." (Maude Barlow and Dylan Penner. July 12, 2019 Edmonton Journal).

You would think that people would be asking what a major social and

Wildlife Appreciation 101

You don't have to travel to Africa to see beautiful creatures. Certainly Africa has amazing biodiversity. One of our daughters travelled to an east African country this past summer. In a nearby National Wildlife Park she saw zebras, lions, elephants, hippos, gazelles, giraffes, wildebeest and crocodiles. And she managed to take some spectacular pictures.

The rest of us might well declare that since we cannot go to a beautiful African wildlife park anytime soon, we are excused from conducting observations in the great outdoors. That however definitely is not the case. Even city dwellers can manage to view some wonderful wildlife nearby. Coyotes in western Canada are not that popular, but they are beautiful animals. Besides coyotes in our backyard in the city of Edmonton, we have observed jack rabbits (bunnies on steroids, declared one visitor from central Canada), red squirrels (small but extra feisty), moose, and all manner of interesting birds. Once, a ground squirrel tried to make a nest under our front porch. I was delighted but my husband scared it away. In central Canada the cast of wildlife characters in the city includes black and grey squirrels, skunks and raccoons.

by Moxie

Lately we have been delighted to see a group of six to eight grey (Hungarian) partridge in our back yard. Introduced to North America about 1900 from Europe, Edmonton seems close to the northern and western edge of their range. But what interesting birds they are! You have to be extra cautious when viewing or photographing them because they are so skittish! They normally walk, but when startled, they run quickly away or flush into the air in a flash. You blink your eyes and they are gone! Be sure to keep records of when and where you see interesting creatures. The records make interesting reading in later years.

So what do we learn from all this? We learn about the wonders of the creation. The variety of creatures, the variety of their lifestyles and their beauty, or at least interesting appearances, cannot fail to impress us. This can be the start of a lifelong habit of appreciating the works of God, and also possibly a career in learning more about biodiversity and sharing these insights with others.



..."appreciating the works of God"..







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ne of the pleasures of staffing a book table are the conversations that happen with people looking at the resources. On many occasions, individuals have requested an introduction to creation. Before responding, I have often inquired what the person's interests are. If the person is interested in physics and mathematics, or in apologetics, there might be little point in showing them a work on fossils, for example. In the 1970s and 1980s, there were general introductory books like *Scientific Creationism* and *What is*

Creation Science? But that was then, and this is now. There are many areas of science that were not even contemplated then, but which we have to deal with today. The good news now is that some general introductory works have appeared which can be very helpful to many people seeking insights into the issues.

One work, published by Institute for Creation Research is entitled *Creation Basics and Beyond: An In-Depth Look at Science, Origins and Evolution.* There are multiple authors listed beginning with Henry

Morris III. This book is well organized. Firstly, they start with apologetics or worldview so that there is no confusion about the foundational nature of Scripture to all the arguments. Next we find a section on biology entitled "Created Kinds or Common Ancestry?" I particularly liked chapters 25 and 26 by Jeffrey Tomkins. These deal with technical issues on human chromosome 2 and origin of life theories. I thought these discussions were particularly clear and well documented. However, it would have been helpful to include more illustrations.



The next section dealt with "Geology: Recent Flood or Millions of Years?" The inclusion of this section shows how comprehensive this book is. In this section we find discussions on the nature of the flood, catastrophic plate tectonics, radiometric dating and the ice age. The chapters on the flood however are poorly documented so that readers who are looking for further information may have a more difficult time accessing suitable references. The list of references under radiometric dating however makes up for some of these deficiencies as some of the scientists were involved in both projects.

The last two sections are "Dinosaurs and Man" (and did birds develop from dinosaurs?) and "Astronomy: Created Cosmos or the Big Bang?" It is evident from the list of sec-

tions that this book really is quite comprehensive and can serve to point people toward other more detailed works within their areas of interest.

A similar book edited by Ken Ham and Bodie Hodge is entitled *Glass House: Shattering the Myth of Evolution.* This book too is divided into sections but mostly the chapters boil down to biology and apologetics. There are also chapters on dinosaurs and some other fossil related topics like whale evolution. I particularly liked chapter 11 by Alan White on the origin of life, and chapter 22 by Georgia Purdom on whether humans and chimps share a common ancestor. In both chapters the il-

lustrations are particularly good and helpful to the discussion. The *Glass House* does not include a section on more general geology (Flood related) or astronomy so that it is not as comprehensive an introduction as *Creation Basics* but the illustrations make it every user friendly. Both books excel of course in their discussions of the impact of worldview.

These books therefore are a welcome addition to the titles available for those seeking good introductions to is-

sues on origins of interest to Christians.

Henry Morris III et al. 2013. Creation Basics & Beyond: An In-Depth Look at Science, Origins, and Evolution. Institute for Creation Research. pp. 348.

Ken Ham and Bodie Hodge. (Editors). 2019. *Glass House: Shattering the Myth of Evolution.* Master Books. pp. 320.



The Wonder Of Boxelder Bugs

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the cold. In the autumn, they may begin to cluster on the side of a house, slowly crawling into cracks and crevices, eventually entering the home where they can secretly and safely survive winter (Holm, 1985, p. 8). Naturally many people are upset when these bugs appear en masse in their homes. When spring comes, boxelder bugs emerge to reproduce. In the prairies there is only one generation per year. The bugs mate in late summer or early fall and soon seek warmer habitation and the cycle begins again. In many warmer regions the overwintering generation mates in the spring and another in the fall.

Boxelder Bug Body Design

Adult boxelder bugs are flat-backed, narrow elongated creatures about halfan-inch long and close to a third-ofan-inch wide. They are typically dark brownish-black with three red stripes running lengthwise along the area behind the head, the **pronotum**. The pinstripes look like those used to decorate automobiles a few years back, and seem to be added for the same reason as auto pin stripes, purely decoration. The head (**proboscis**) is a beautiful reddish orange and has four thin long segmented antennae. The nymphs or immature bugs are physically similar to the adults except that they have a smaller, more rounded wingless body and are bright red in color. They have excellent smell, good eyesight, and good hearing, especially for their mating call (Holm, 1985, p. 23).

Their Well-Designed Eyes and Claws

The boxelder bug has a compound design eye type that contains hundreds of facets which enables the insect to be aware of much of the world around it. This gives the creature over a 300° angle of vision. As it moves in its travels, each eye picks up informa-



tion about objects on each side, as well as what is directly in front, on top, and below it.

The miniature claw structures that become visible under microscopic inspection are designed for a vast array of tasks. They can be used to effectively grasp onto things to allow the insect to climb trees and feed itself. They can also be used to push itself or other objects and to obtain information about the environment.

The creature is specifically designed to help it respond to environmental changes. While many insects are very hairy, allowing them to maneuver easily due to their hairs acting as feelers, the boxelder sensory hairs are exceptionally interesting. Each sensory hair has its own set-in pocket enclosed by a frame that protects the animal's shell, yet allows the hair to move to obtain information about its environment.

While the hair structures are flexible to obtain information, they are also thicker at the base to provide necessary strength. Hairs on the insects' sides are also arranged to maximize its tactile stimulation input. This allows them to quickly determine whether an object is

a leaf, rock or a blade of grass. A single hair sticks out farther than others to allow the animal to sense its surrounding environment and respond in some way, depending on the response required.

The Scanning Electron Microscope

But how do we see all these intricate details? Pictures taken



by a scanning electron microscope (SEM) help to reveal the full beauty of the insect. SEM uses an electron beam that projects a top-to-bottom raster scan pattern across the image scanned. The electrons bounce off the image and are picked up by a camera-like device. The electrons shot at the image bounce off at an angle that changes according to the shape of the image. The image produced by the reflections is then displayed on a computer screen. The electron beam changes are processed by a computer to reproduce the image scanned. The resultant image produced is always black and white but is often colorized by a computer.

The object scanned is often plated with metal as part of the preparation process so that the excess electrons will be effectively drained away when scanned. Furthermore, metal plating helps the electrons rastering across the image to ricochet more accurately. This produces not only a better image, but the object viewed is less likely to be burned by the electron beam. An enormous amount of detail can be obtained because the metal plating is incredibly thin and accurately reflects most of the even very small contours of the object being scanned.



Boxelder Bug Evolution

I could not find a single claim about boxelder evolution. This was not unexpected. I have published much on insect evolution and found little evidence to no evidence for the evolution of any insect (Bergman, 2017). As far as we can tell, the first boxelder bug was very similar to, if not identical to, a modern boxelder bug.

The Important Role of Insects

Hours of enjoyable time can be invested observing insects hard at work in their miniature world. Bible passages mention many admirable qualities of specific insects. Careful observation of the ant, for example, soon gives meaning to the scriptural exhortation: "Take a lesson from the ants, lazy ones; observe their industrious ways and become wise" (Proverbs 6:6). Is it possible God is commanding people to observe the fact that their work ethic includes caring for their fellow workers? It appears His design of the ant's character, and our encouragement to observe them, is more complex and wonderous the deeper we look.

An obvious quality of ants is their persistence and determination, often carrying or tenaciously dragging objects weighing over twice their own weight for long distances. As they trudge along, they may fall or roll down some precipice but nonetheless persist in their travels. Ants keep their nests clean, instinctively prepare for their future, and even show concern for their fellow workers—at times assisting injured or exhausted ants back to their nest.

Most insects are harmless and some, including ladybugs and also spiders, are generally beneficial because both consume many harmful insects. Fully 85 percent of flowering plants are either completely or partly dependent on insect pollination. Insects also play a critical role in building the soil and, as scavengers, reducing the level of debris and waste on the ground. Insects occupy an important place in relation to the rest of creation and determine the character of our world to a far greater extent than most people realize (Hill,1997). If they were suddenly to disappear, the world would be changed so extensively that it eventually would not be able to support life as we know it (Niaz, 2018).

Insects, unfortunately, c a u s e an instinctive repulsion in many persons. This can easily be overcome simply by learning more about them and their world.

Insects are enormously important for humans (Fabre, 1998). Many kinds of chemicals, dyes and shellacs are produced from insects. They also produce food (such as honey), medicine, clothing (such as silk), pollinate flowers and are even part of our cultures' folklore. Butterflies, ladybugs, crickets, and bees are a few examples of insects that bring much beauty into our lives. Each one has its own story to tell and its own secrets. After studying the boxelder bug, I am even more confident that the study of insects is a fascinating journey that reveals some of the almost-infinitely intricate handiwork of our Creator.

References

- Bergman, Jerry. 2017. Fossil Forensics: Separating Fact from Fantasy in Paleontology. Tulsa, OK: Bartlett Publishing.
- Fabre, Jean Henry. 1998. *Fabre's Book of Insects*. Mineola, New York Dover Publications.
- Hill, Dennis. 1997. The Economic Importance of Insects. New York: Springer
- Holm, Bill. 1985. Boxelder Bugs. Minneapolis, MN: Milkweed Editions.
- Niaz, Umar. 2018. Role of Insects in Ecosystem New York: Scholars' Press.

Making Sense of Turbulent Times

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economic shift would look like. What are we progressing from and what are we progressing toward? What values are foundational to where our society has been and what constitute the future initiatives and attitudes?

Christians support a standard for truth and behavior that is the Bible. In large part, western governments have also, in past generations, based their values on biblical standards. But today western societies support no such standard. Based on the idea of evolution, society looks for ever changing values. The appeal of progressive attitudes means a rejection of the past. So how does this impact our relationship to the environment?

In the early years after World War II, people had time to pay attention to the environment. Most people were concerned about water and air pollution and erosion. New concerns however arose about fifty years ago. In 1968 and 1969, three influential men helped to kick-start the environmental movement. Their writings began the environmental movement and determined its nature. Their values determined today's values.

Garrett Hardin (1915-2003), was professor of biological sciences and

environmental studies at University of California, Santa Barbara. In 1968 he published an article entitled "The Tragedy of the Commons" in the journal Science. It was a reflection on the effects of human population on nature. Just as greedy farmers might load too many of their own cattle onto a community pasture (thereby causing the whole system to crash), similarly, he said, we have to prevent the family, race, religion or nationality from loading too many offspring onto Earth's ecosystem. He urged governments to control family size by force because, he said, there was no value greater than nature. An atheist and an evolutionist, he had a huge impact on social attitudes. He certainly had no interest in protecting religious or cultural beliefs.

Then there was Paul Ehrlich (1932-), an evolutionary and population biologist at Stanford University, California. In 1968 the Sierra Club (an environmental group) helped to publish Dr. Ehrlich's *The Population Bomb*. He predicted that hundreds of millions of people would starve by the late 1970s. He warned that in ten years all important animal life in the seas would be extinct. None of this happened. He recommended not sending food aid to countries with rapidly increasing populations because this would encourage their exerting a negative impact on spaceship Earth.

Ian McHarg (1920-2001) was a landscape architect whose claim to fame was his bitter attacks on the Christian faith. In his 1969 book *Design with Nature*, he raged against the arrogant Christians who think that God has provided nature for their sustenance. These atheistic men, and others, set the foundations for the values that we see displayed by governments and society today.

Christians, for their part, consider that we have a duty to honour the commands of God, the needs of our fellow man, and the needs of nature. Christians prioritize their standards of conduct firstly toward God, secondly toward mankind, and thirdly towards nature. Notice that the needs of mankind for life, take priority over nature. We seek to mitigate any impacts on nature, but there will never be a time when man has zero impact on nature.

Secular society, for its part, recognizes no duty to honour God's commands. Based on the values of the founding environmentalists, they also recognize no duty toward their fellow man. Indeed, multiple influential scientists have called human populations



a disease or a cancer on the Earth. For example, famous chemist and science fiction author Isaac Asimov (1920-1992) declared in a general interest article in *Weekend Magazine* (July 25, 1970): "Like disease, Man is multiplying so rapidly that he is endangering the life of the whole planet." The article was entitled "The Cancer Called Man."

The practical implications of such disdain for humans was soon apparent. The secularists consider that human life is expendable. Lifeboat ethics was an idea promoted by Drs. Hardin and Ehrlich. They likened the Earth to a lifeboat that is too full of people so that it is starting to sink. The solution, they said, was to push the least deserving member(s) out of the boat. Numerous humorous cartoons appeared that suggested that those in the lifeboat should push the most annoying one(s) out first. Nobody seemed to question whether it was right to push out anybody. The environmentalists, in general, are not interested in promoting the welfare of mankind. Their objective is to protect nature.

The Bible tells us that humans are more important than animals (nature) and therefore that man's interests take priority over nature (Luke 12:6-7). Thus the Christian cautiously uses nature as required to support his own life and current populations. Having an impact on the Earth to support agriculture and other needs is unavoidable. Nevertheless, in an article which appeared in *Science* in 1967 (entitled "The Historical Roots of Our Ecological Crisis") historian Lynn White declared that we need to adopt a new religion which venerates nature rather than God, if we hope to solve our environmental problems. Imagine such a blatant rejection of Christian faith on the part of a science journal!

Eco-activists thus insist that nature ought to be valued over people. For example, Canadian plant ecologist Stan Rowe (1918-2004) in his book Home Place declared "Ecosystem (Nature) ought to be valued above people on the basis of precedence in time, evolutionary creativity and diversity and the complexity of a higher level of organization." (p. 125) Many environmentalists value the memory and words of forester Aldo Leopold (1886-1948) whose book A Sand County Almanac (1949) declared that standards of right and wrong are to be judged on the basis of effect on nature. Thus he declared that any activity that impacts nature, is wrong. However almost anything for man's support interferes with nature. Are people today considered expendable compared to nature? The popular answer is clearly yes. Would Christians agree to such an agenda? Hopefully not.

As far as present day environmental activism is concerned, we are operating in a milieu of hostility to Christian faith, to mankind and to democratic institutions that seek to protect the local interests of voters.



An opinion piece in the Edmonton Journal (February 27, 2020) from Nathan Cooper, Speaker of the Legislative Assembly of Alberta declared" Today, this very minute, we see a generation turning away from our democratic institutions and values." Concern for the environment is encouraging our youth to support globalist policies and an authoritarian style of government. Indeed an article in *Nature* on the topic of democratic governments declared: "Many Western policymakers assume that technological progress is best achieved in a liberal market underpinned by free trade. This is not necessarily the case. China has scaled up renewable energy through topdown rule and state planning." (Nature May 2, 2019 p. 31)

Christians, for their part, should be very critical of "progressive" values. Environmental recommendations concerning "climate change", land use, and agricultural practices, do not have the interests of people at heart. We do not want a new social order which involves rejecting historical norms and standards based originally on the Bible. Traditional is not a bad word.





Glass House

Ken Ham and Bodie Hodge (editors) Experts like Drs. David Menton, Nathaniel Jeanson and Georgia Purdom expose flaws in popular evolutionary arguments including the horse sequence, human chromosome 2, whale fossils, dinosaur-to-bird arguments and more. Cutting edge layman level discussion recommended for teens to adults.

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Creation Basics & Beyond Henry Morris III et al.

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