



# CSA News

*The Creation Science Association for Mid-America*

*"It is better to trust in the Lord than to put confidence in man."*

*Psalm 118:8*

**Volume 31: (1)**

**January 2014**

## **In This Issue**

**“INSTANT” EROSION**

**GOD CREATED MUSIC: FIBONACCI'S SERIES**

**Coming Events**

## **“INSTANT” EROSION**

*by Douglas Roger Dexheimer*

Evolutionary geologists teach that erosional processes occur over periods measured in time frames of millions, even billions, of years. The commonly held notion is that wind and rain act very slowly on, for example, mountains composed of erosion-resistant materials.

The key to erosion is something called “fluid flow.” Water, air, and even ice are fluids because they tend to flow from one place to another due to the force of gravity. Of the three, liquid water is the most common agent of erosion because there's so much of it on the surface of the Earth.<sup>1</sup>

Geologists who study erosion rates believe that land erodes at an average rate of 40 feet per million years. If that rate were accurate, all continents should have been reduced to sea level in only 50 million years – far too rapid a rate to account for the ages of “billions-of-years” assigned to so many of earth's exposed rock features. One must conclude, therefore, that currently observed erosion rates do *not* support geologists' claimed age for the earth, which is generally expressed in terms of *billions* of years. Enter, “instant” erosion:

Two South African research scientists have documented a phenomenon that indicates a particular type of soil erosion might have taken place in a split second rather than eons, as mainstream scientists have believed. .... The conclusion could upset widely accepted estimates for the age of the Earth.<sup>2</sup>

Brian Thomas, a science writer for the Institute for Creation Research (ICR), says the new research findings make “earth's old age assignment even less credible.” The finding that lightning can accomplish in a millisecond what previously was thought to take generations calls into question “old age assignments for earth's land features.” He says those estimates do not account for *lightning strikes*.

Lightning-generated cracks may not be a well-known erosional process, but earth scientists are generally more familiar with fulgarites – long, branched tubes of quickly melted and re-solidified materials created when lightning strikes sand and other ground

debris. Yet, Earth's surface does not display billions or even millions of years' worth of fulgarites.<sup>3</sup>

Thomas quotes a prominent physicist who claims that through the "alleged 4.6 billion years of earth history," there should be hundreds of such marks per square meter of land.

Where are all the missing fulgarites? Why are continents and high mountains still standing despite dramatic lightning damage and relatively fast erosion rates. The answers to these questions are the same – the world is only thousands, not billions, of years old.<sup>4</sup>

Geomorphologist Bob Anderson reports that he once observed a lightning bolt carving a trench 165 feet long and four inches deep while hiking along Colorado's *Front Range*.

One thing I've seen on summits in the West is a boulder whose original site was a meter away from where the block rests on the surface, a flat bedrock surface. There's no other surface process (than lightning) that we know of that could do that.<sup>5</sup>

Thomas, only a few weeks earlier, had raised questions about the results of a Geological Society of America study that concluded the average erosion rate for rocky outcrops is 40 feet every million years.

The average thickness of continental crust above sea level can be estimated at about 634 meters, or 2,044 feet. To erode 2,000 feet of crust at 40 feet per 1 million years would require only 50 million years. So, if the earth is *billions* of years old, why is its surface not complete flat? .... The fact that mountains and even continents still exist is testimony to the young age of the earth. It looks as though the continents cannot be billions of years old, because they would all have eroded in a fraction of that time. And yet they still stand tall.<sup>6</sup>

Original, *genuine* scientific research and study, unfettered by entrenched evolutionary bias, once again seems to demolish the notion of an earth age measured in *billions* of years.

---

<sup>1</sup> <http://teacher.scholastic.com/dirt/erosion/whateros.htm>

<sup>2</sup> <http://www.wnd.com/2013/12/phenomenon-throws-twist-into-age-of-earth/#bDkliMM9PT0zLt1o.99>

<sup>3</sup> <http://www.icr.org/article/7846/>

<sup>4</sup> *Ibid.*

<sup>5</sup> <http://www.livescience.com/40701-lightning-strikes-erode-mountains.html>

<sup>6</sup> *Ibid.*

Ω

---

**February Monthly Meeting**  
**Tuesday February 4th, 2013**  
**God Created Birds**

by *Douglas Roger Dexheimer*

Then God said, “Let ... birds fly through the sky over the earth.” So God created ... every type of flying bird. God saw that they were good. God blessed them and said, “Be fertile, increase in number, and let there be many birds on the earth.” There was evening, then morning—a fifth day. Gen 1: 20 - 23.

During this presentation we will show photos of our December "Waterfowl" safari to Squaw Creek. Additionally we will show the video, "Flight," from Ilustra, as well as other videos demonstrating the intricate design required for birds of flight.

Ω

### **CSA Monthly Meeting Location**

Westbrooke Church

9777 Antioch

Overland Park, KS 66121

10 blocks east of 69 Highway (or Switzer) on 95th St. to Antioch, south two blocks on Antioch, on east side of street.

Fellowship & book table: 6:15PM. Meeting: 7:00PM.

## **Monthly Meetings**

**2014**

(1st Tuesday of each month; content subject to change; no signup or registration necessary.)

- January 7th: “The Great Debate” DVD, moderated by *Bob Farwell*.
- February 4th: “God Created Birds” DVD, moderated by *Douglas Roger Dexheimer*.
- March 4th: “The Mystery of the Cambrian Fossil Record” DVD, moderated by *Bob Farwell*.
- April 1st: “Evolution vs. God” DVD, moderated by *Kevin Anderson*.
- May 6th: “Noah Extravaganza,” by *Kevin Anderson & Bill Cowherd*.
- June 3rd: “Radiometric Dating,” by *Dave Penney*.
- July 1st: “The Great Debate” DVD, moderated by *Bob Farwell*.
- August 5th: “Ice Age and Global Warming” DVD, moderated by *Kevin Anderson*.
- September 2nd: “Relativity and Creationism,” by *Dave Penney*.
- October 7th: To be announced.
- November 4th: “The Great Debate” DVD, moderated by *Bob Farwell*.
- December 2nd: “Hegelian Implications,” by *Dave Penney*.

### **Expanded Monthly Meeting Descriptions**

**January 7**

**“The Great Debate” DVD**

**moderated by Bob Farwell**

Ken Ham, AiG president, is perhaps the most widely recognized creation-apologist in the world today. Ken Ham and AiG astrophysicist Dr. Jason Lisle engage Drs. Hugh Ross (Reasons to Believe)

and Walt Kaiser (president of Gordon-Conwell Theological Seminary), both of whom are proponents of an old earth, no-global-flood view of Bible interpretation. In this eye-opening debate, well-mannered disagreement is punctuated by intriguing confrontations as these four Christian leaders communicate their views. Ham and Lisle implore Ross and Kaiser to accept the Genesis account of history as written, while Ross and Kaiser argue for their view that the first chapters of Genesis are more symbolism than history.

**February 4**  
**“God Created Birds” DVD**  
moderated by Douglas Roger Dexheimer

Gen 1: 20 Then God said, “Let ... birds fly through the sky over the earth.” 21 So God created ... every type of flying bird. God saw that they were good. 22 God blessed them and said, “Be fertile, increase in number, and let there be many birds on the earth.” 23 There was evening, then morning—a fifth day.

During this presentation, videos from the CSAMA December Waterfowl Safari to Squaw Creek; FLIGHT, a video from Ilustra, and other videos regarding the intricate design of birds in flight will be shown.

**March 4th**  
**“The Mystery of the Cambrian Fossil Record” DVD**  
moderated by Bob Farwell

“The fossil record had caused Darwin more grief than joy. Nothing distressed him more than the Cambrian explosion.” (Gould, Stephen Jay, *The Panda’s Thumb*, 1980, pp. 238-239.)

*Darwin’s Dilemma* will explore the so-called *Cambrian Explosion* and the scientific controversy that surrounds it to this day: Although earth’s surface is covered with countless deposits of rich fossil beds, *why is every one of them completely devoid of any of the numerous transitional forms necessary for the development of the fully-formed organisms that we find in the Cambrian rocks?* Is this due to, as Darwin put it, “the imperfection of the geological record”? Examine the issue for yourself in this fascinating look at the mystery that continues to dumbfound evolution’s best experts.

**April 1st**  
**“Evolution vs. God” DVD**  
moderated by Kevin Anderson

**May 6th**  
**“Noah Extravaganza”**  
by Kevin Anderson & Bill Cowherd

**June 3rd**  
**“Radiometric Dating”**  
by Dave Penney

We'll examine the types of radioactivity, the specific chemical elements used for radiometric dating, the false assumptions employed by scientists who use radioactive decay as a method of dating artifacts, and the overall unreliability of radiometric dating methods. We'll discuss specific problems with dating the same artifact with different elements, and how radioactive dates are often quietly altered or discarded when they *disagree* with the *known age* of an artifact. We'll discuss whether radiometric dating better supports the commonly held old-earth, or rather, a young-earth viewpoint.

**July 1st**  
**“The Great Debate” DVD**  
moderated by Bob Farwell

Ken Ham, AiG president, is perhaps the most widely recognized creation-apologist in the world today. Ken Ham and AiG astrophysicist Dr. Jason Lisle engage Drs. Hugh Ross (Reasons to Believe) and Walt Kaiser (president of Gordon-Conwell Theological Seminary), both of whom are proponents of an old earth, no-global-flood view of Bible interpretation. In this eye-opening debate, well-mannered disagreement is punctuated by intriguing confrontations as these four Christian leaders communicate their views. Ham and Lisle implore Ross and Kaiser to accept the Genesis account of history as written, while Ross and Kaiser argue for their view that the first chapters of Genesis are more symbolism than history.

**August 5th**  
**“Ice Age and Global Warming” DVD**  
moderated by Kevin Anderson

**September 2nd**  
**“Relativity and Creationism”**  
by Dave Penney

Virtually without exception, scientists assume that Einstein's two theories of relativity -- i.e., *special* relativity and *general* relativity -- are true. Indeed, many *creation scientists* affirm the validity of these theories and try to accommodate them to a young universe. The two theories and their postulates will be examined, including (1) the assumed constant speed of light in the universe, (2) the absence of a transport medium for light, (3) the formula,  $E = mc^2$ , as it applies to the *assumed interconvertibility* of matter and energy, (4) the equivalence of gravitational and accelerating frames of reference, and (5) the effects of gravity on a time-space continuum. If the speed of light *is* constant, then the theories of relativity pose serious problems for the *young-earth creationist*.

**October 7th**

To be announced.

**November 4th**  
**“The Great Debate” DVD**  
moderated by Bob Farwell

Ken Ham, AiG president, is perhaps the most widely recognized creation-apologist in the world today. Ken Ham and AiG astrophysicist Dr. Jason Lisle engage Drs. Hugh Ross (Reasons to Believe)

and Walt Kaiser (president of Gordon-Conwell Theological Seminary), both of whom are proponents of an old earth, no-global-flood view of Bible interpretation. In this eye-opening debate, well-mannered disagreement is punctuated by intriguing confrontations as these four Christian leaders communicate their views. Ham and Lisle implore Ross and Kaiser to accept the Genesis account of history as written, while Ross and Kaiser argue for their view that the first chapters of Genesis are more symbolism than history.

**December 2nd**  
**“Hegelian Implications”**  
by Dave Penney

Georg Wilhelm Hegel, a German philosopher who died in 1831, introduced his Hegelian *triad* (i.e., *thesis, antithesis, and synthesis*), which was transformed by the *Young, or Left, Hegelians* into a worldview philosophy which denies the existence of absolute truth. The belief that the universe is based on absolutes, which belief, earlier, even atheistic philosophers held, assumes that those absolutes were established by an external, supernatural God. After Hegel, atheistic philosophers in every field of knowledge developed a *Hegelian triad worldview* which replaced the formerly predominant *deistic absolutism*. The final field of this developmental process occurred in the “hard sciences,” reaching into Einstein's theories of relativity in the early 1900’s. Today academia and pop culture are captives of the resultant *Hegelianism*.

Ω

---

**GOD CREATED MUSIC:**  
**FIBONACCI'S SERIES**  
by Douglas Roger Dexheimer

*From time to time over the years, I have presented at CSAMA meetings a program on the Biblical aspects of music. I typically concluded those presentations with a bit of music theory, using some piano keyboard diagrams as visual aids. Some individuals have asked me to enhance my presentations with material I've presented in other programs. I hope this article will serve to satisfy those requests.*

Music and musical instruments are mentioned early in God’s Word. The following references (KJV unless otherwise indicated) indicate that music was well developed among ancient mankind -- even before the Genesis flood.

And Adah bare Jabal: he was the father of such as dwell in tents, and *of such as have* cattle. And his brother’s name *was* Jubal: he was the father of all such as handle the harp and organ. **Genesis 4:20, 21.**

Make thee two trumpets of silver; of a whole piece shalt thou make them: that thou mayest use them for the calling of the assembly, and for the journeying of the camps. And when they shall blow with them, all the assembly shall assemble themselves to thee at the door of the tabernacle of the congregation. **Numbers 10:2, 3.**

After that you will come to the Hill of God where there are Philistine garrisons. When you arrive at the city, you will meet a group of prophets coming down from the high

place<sup>1</sup> prophesying. They will be preceded by harps, tambourines, flutes, and lyres. The Spirit of the Lord will control you, you will prophesy with them, and you will be transformed into a different person. When these signs have happened to you, do whatever your circumstances require because God is with you. **I Samuel 10:5-7.**<sup>2</sup>

These are the men David put in charge of music in the Lord's sanctuary, after the ark was placed there. They performed music before the sanctuary of the meeting tent until Solomon built the Lord's temple in Jerusalem. **I Chronicles 6:31, 32.**<sup>3</sup>

The priests stood in their assigned spots, along with the Levites who had the musical instruments used for praising the Lord. (These were the ones King David made for giving thanks to the Lord and which were used by David when he offered praise, saying, 'Certainly his loyal love endures.') Opposite the Levites, the priests were blowing the trumpets, while all Israel stood there. **II Chronicles 7:6.**<sup>4</sup>

And with them Heman and Jeduthun with trumpets and cymbals for those that should make a sound, and with musical instruments of God. And the sons of Jeduthun *were* porters. **I Chronicles 16: 42.**

Hezekiah ordered the burnt sacrifice to be offered on the altar. As they began to offer the sacrifice, they also began to sing to the Lord, accompanied by the trumpets and the musical instruments of King David of Israel. The entire assembly worshiped, as the singers sang and the trumpeters played. **II Chronicles 29:27.**<sup>5</sup>

I gathered me also silver and gold, and the peculiar treasure of kings and of the provinces: I gat me men singers and women singers, and the delights of the sons of men, *as* musical instruments, and that of all sorts (*King Solomon*). **Ecclesiastes 2:8.**

These are just a few of the Biblical references to the use of music in worship, as prescribed by *the LORD*.

## **Enter... *Fibonnaci***

For those who have never seen my presentations, here is a short review of the *Fibonacci series* as it applies to sound and music. (You may want to read the following article before we begin, as an aid in understanding *the sound of the golden mean*: <http://www.simonheather.co.uk/pages/goldenmean.php>.)

### **The Sound of the *Golden Mean***

The *Fibonacci series* relates to all of the *musical intervals* comprising *beautiful chords*. The *Fibonacci numbers*, starting with zero, are 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, and so on.

Intervals between notes of the scale. (*Please refer to the keyboard illustration.*)





Starting with C on the piano keyboard (the leftmost white key in the illustration), and moving up the keyboard on the white keys, the intervals are expressed in terms of *steps* (including both black and white keys). The interval from C to D is two steps. From D to E is also two steps. The interval from E to F is only one step.

Working up the *white keys* from C on the keyboard (C, D, E, F, G, A, B, and C), the intervals between those keys are: 2,2,1,2,2,2,1. These are notes of the well-known *key of C-major*.

If you start on a key other than C, and follow the same *intervals*, you'll hear what are known as *the natural notes* of the key identified by the note on which you started. For example, if you start on F, the notes of the scale in the *key of F* are F, G, A, A# (A-sharp, which is a black key), C, D, E, and F. (For further information on scales, see [http://en.wikipedia.org/wiki/Scale\\_\(music\)](http://en.wikipedia.org/wiki/Scale_(music)).)

There are many special *kinds* of scales. Traditional *Western music* typically utilizes but a small subset of the total number of scale types.

The following table shows some *Fibonacci-ratio* musical chords using the fundamental tone of A (the second set of note columns are similar chords using the fundamental tone, C):

Semitone	Fractions	Decimals	Musical Interval	Natural	Key of A	Hz	Key of C	Hz
0	1 / 1	1.00000	unison	480	A - A	440	C - C	528
1	16 / 15	1.06667	minor semitone	512	A - A#	469.3333	C - C#	563.2
2	9 / 8	1.12500	major second	540	A - B	495	C - D	594
3	6 / 5	1.20000	minor third	576	A - C	528	C - D#	633.6
4	5 / 4	1.25000	major third	600	A - C#	550	C - E	660
5	4 / 3	1.33333	perfect fourth	640	A - D	586.6667	C - F	704
6		1.40625	diatonic tritone	675	A - D#		C - F#	
7	3 / 2	1.50000	perfect fifth	720	A - E	660	C - G	792
8	8 / 5	1.60000	minor sixth	768	A - F	704	C - G#	844.8
9	5 / 3	1.66667	major sixth	800	A - F#	733.3333	C - A	880
10	9 / 5	1.80000	minor seventh	864	A - G	792	C - A#	950.4
11	15 / 8	1.87500	major seventh	900	A - G#	825	C - B	990
12	2 / 1	2.00000	octave	960	A - A	880	C - C	1056

Table of Intervals, in the key of A, and equivalent in the key of C (green highlights signify harmonic intervals that feature Fibonacci numbers in both numerator and denominator)

Notice that both the numerator and the denominator of each fraction are numbers from the *Fibonacci series*. The whole-number fractions are true for "mean tuning." That is the system used for most wind instruments, the exception being trombones, which can play any desired interval by the musician's shortening or lengthening the instrument's built-in air chamber (*slide*) as he plays.

## Equal Tempering

The intervals in a modern keyboard instrument, however, are *equally tempered*, in order to prevent problems that result when such an instrument is played in its vast number of available musical keys. The frequencies of individual notes of an *equally tempered* scale are given in this chart. Note that that some of the notes are shifted a bit from the *mean tuning* as indicated by the table above. The *tempering* of the frequencies causes this slight shift. It can be seen that a mean



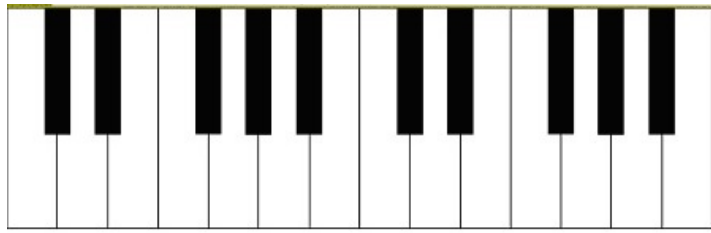
tone wind instrument will play properly in specific keys, but in some *other* keys, some *beating* in frequencies will occur between the wind instrument and the keyboard.

*Table of Frequencies of an Equally-Tempered Scale.* For your information, C<sub>0</sub> is the lowest note on a typical pipe organ. It has a frequency of about 16 Hz (*cycles per second*), and the length of an open pipe is 32 feet from mouth to top. A “stopped” organ pipe is half as long for the same note, but an octave higher. That is, the C<sub>1</sub> pipe is half as long, about 16 feet, and so on. *Middle C* on keyboards is shown as C<sub>4</sub>. Accordingly, the A above *middle C*, labeled “A<sub>4</sub>,” is 440 Hz, or “*standard concert pitch*.”

Octave 0			Octave 1			Octave 2			Octave 3		
Note	Frequency (Hz)	Wavelength (cm)	Note	Frequency (Hz)	Wavelength (cm)	Note	Frequency (Hz)	Wavelength (cm)	Note	Frequency (Hz)	Wavelength (cm)
C <sub>0</sub>	16.35	2100	C <sub>1</sub>	32.7	1050	C <sub>2</sub>	65.41	527	C <sub>3</sub>	130.81	264
C <sup>#</sup> <sub>0</sub> /D <sup>b</sup> <sub>0</sub>	17.32	1990	C <sup>#</sup> <sub>1</sub> /D <sup>b</sup> <sub>1</sub>	34.65	996	C <sup>#</sup> <sub>2</sub> /D <sup>b</sup> <sub>2</sub>	69.3	498	C <sup>#</sup> <sub>3</sub> /D <sup>b</sup> <sub>3</sub>	138.59	249
D <sub>0</sub>	18.35	1870	D <sub>1</sub>	36.71	940	D <sub>2</sub>	73.42	470	D <sub>3</sub>	146.83	235
D <sup>#</sup> <sub>0</sub> /E <sup>b</sup> <sub>0</sub>	19.45	1770	D <sup>#</sup> <sub>1</sub> /E <sup>b</sup> <sub>1</sub>	38.89	887	D <sup>#</sup> <sub>2</sub> /E <sup>b</sup> <sub>2</sub>	77.78	444	D <sup>#</sup> <sub>3</sub> /E <sup>b</sup> <sub>3</sub>	155.56	222
E <sub>0</sub>	20.6	1670	E <sub>1</sub>	41.2	837	E <sub>2</sub>	82.41	419	E <sub>3</sub>	164.81	209
F <sub>0</sub>	21.83	1580	F <sub>1</sub>	43.65	790	F <sub>2</sub>	87.31	395	F <sub>3</sub>	174.61	198
F <sup>#</sup> <sub>0</sub> /G <sup>b</sup> <sub>0</sub>	23.12	1490	F <sup>#</sup> <sub>1</sub> /G <sup>b</sup> <sub>1</sub>	46.25	746	F <sup>#</sup> <sub>2</sub> /G <sup>b</sup> <sub>2</sub>	92.5	373	F <sup>#</sup> <sub>3</sub> /G <sup>b</sup> <sub>3</sub>	185	186
G <sub>0</sub>	24.5	1400	G <sub>1</sub>	49	704	G <sub>2</sub>	98	352	G <sub>3</sub>	196	176
G <sup>#</sup> <sub>0</sub> /A <sup>b</sup> <sub>0</sub>	25.96	1320	G <sup>#</sup> <sub>1</sub> /A <sup>b</sup> <sub>1</sub>	51.91	665	G <sup>#</sup> <sub>2</sub> /A <sup>b</sup> <sub>2</sub>	103.83	332	G <sup>#</sup> <sub>3</sub> /A <sup>b</sup> <sub>3</sub>	207.65	166
A <sub>0</sub>	27.5	1250	A <sub>1</sub>	55	627	A <sub>2</sub>	110	314	A <sub>3</sub>	220	157
A <sup>#</sup> <sub>0</sub> /B <sup>b</sup> <sub>0</sub>	29.14	1180	A <sup>#</sup> <sub>1</sub> /B <sup>b</sup> <sub>1</sub>	58.27	592	A <sup>#</sup> <sub>2</sub> /B <sup>b</sup> <sub>2</sub>	116.54	296	A <sup>#</sup> <sub>3</sub> /B <sup>b</sup> <sub>3</sub>	233.08	148
B <sub>0</sub>	30.87	1110	B <sub>1</sub>	61.74	559	B <sub>2</sub>	123.47	279	B <sub>3</sub>	246.94	140
C <sub>1</sub>	32.7	1050	C <sub>2</sub>	65.41	527	C <sub>3</sub>	130.81	264	C <sub>4</sub>	261.63	132

Octave 4			Octave 5			Octave 6			Octave 7		
Note	Frequency (Hz)	Wavelength (cm)	Note	Frequency (Hz)	Wavelength (cm)	Note	Frequency (Hz)	Wavelength (cm)	Note	Frequency (Hz)	Wavelength (cm)
C <sub>4</sub>	261.63	132	C <sub>5</sub>	523.25	65.9	C <sub>6</sub>	1046.5	33	C <sub>7</sub>	2093	16.5
C <sup>#</sup> <sub>4</sub> /D <sup>b</sup> <sub>4</sub>	277.18	124	C <sup>#</sup> <sub>5</sub> /D <sup>b</sup> <sub>5</sub>	554.37	62.2	C <sup>#</sup> <sub>6</sub> /D <sup>b</sup> <sub>6</sub>	1108.73	31.1	C <sup>#</sup> <sub>7</sub> /D <sup>b</sup> <sub>7</sub>	2217.46	15.6
D <sub>4</sub>	293.66	117	D <sub>5</sub>	587.33	58.7	D <sub>6</sub>	1174.66	29.4	D <sub>7</sub>	2349.32	14.7
D <sup>#</sup> <sub>4</sub> /E <sup>b</sup> <sub>4</sub>	311.13	111	D <sup>#</sup> <sub>5</sub> /E <sup>b</sup> <sub>5</sub>	622.25	55.4	D <sup>#</sup> <sub>6</sub> /E <sup>b</sup> <sub>6</sub>	1244.51	27.7	D <sup>#</sup> <sub>7</sub> /E <sup>b</sup> <sub>7</sub>	2489.02	13.9
E <sub>4</sub>	329.63	105	E <sub>5</sub>	659.26	52.3	E <sub>6</sub>	1318.51	26.2	E <sub>7</sub>	2637.02	13.1
F <sub>4</sub>	349.23	98.8	F <sub>5</sub>	698.46	49.4	F <sub>6</sub>	1396.91	24.7	F <sub>7</sub>	2793.83	12.3
F <sup>#</sup> <sub>4</sub> /G <sup>b</sup> <sub>4</sub>	369.99	93.2	F <sup>#</sup> <sub>5</sub> /G <sup>b</sup> <sub>5</sub>	739.99	46.6	F <sup>#</sup> <sub>6</sub> /G <sup>b</sup> <sub>6</sub>	1479.98	23.3	F <sup>#</sup> <sub>7</sub> /G <sup>b</sup> <sub>7</sub>	2959.96	11.7
G <sub>4</sub>	392	88	G <sub>5</sub>	783.99	44	G <sub>6</sub>	1567.98	22	G <sub>7</sub>	3135.96	11
G <sup>#</sup> <sub>4</sub> /A <sup>b</sup> <sub>4</sub>	415.3	83.1	G <sup>#</sup> <sub>5</sub> /A <sup>b</sup> <sub>5</sub>	830.61	41.5	G <sup>#</sup> <sub>6</sub> /A <sup>b</sup> <sub>6</sub>	1661.22	20.8	G <sup>#</sup> <sub>7</sub> /A <sup>b</sup> <sub>7</sub>	3322.44	10.4
A <sub>4</sub>	440	78.4	A <sub>5</sub>	880	39.2	A <sub>6</sub>	1760	19.6	A <sub>7</sub>	3520	9.8
A <sup>#</sup> <sub>4</sub> /B <sup>b</sup> <sub>4</sub>	466.16	74	A <sup>#</sup> <sub>5</sub> /B <sup>b</sup> <sub>5</sub>	932.33	37	A <sup>#</sup> <sub>6</sub> /B <sup>b</sup> <sub>6</sub>	1864.66	18.5	A <sup>#</sup> <sub>7</sub> /B <sup>b</sup> <sub>7</sub>	3729.31	9.3
B <sub>4</sub>	493.88	69.9	B <sub>5</sub>	987.77	34.9	B <sub>6</sub>	1975.53	17.5	B <sub>7</sub>	3951.07	8.7
C <sub>5</sub>	523.25	65.9	C <sub>6</sub>	1046.5	33	C <sub>7</sub>	2093	16.5	C <sub>8</sub>	4186.01	8.2

Unfretted string instruments can play any desired intervals. However, fretted string instruments, such as the guitar, mandolin, banjo, etc., are *fixed* in their intervals by the distances between adjacent and non-adjacent frets. The frequencies of the stopped (*fingered*) strings should agree with the tuning of a typical keyboard instrument’s *equal-temperament* tuning (see [http://en.wikipedia.org/wiki/Harmonic\\_series](http://en.wikipedia.org/wiki/Harmonic_series) (“music”).



The illustration above shows two octaves of a musical keyboard. The leftmost key is C natural, followed by C#, etc. The eighth note is C, which is the first harmonic of the first C.

Now (*and pay attention here*), in **ONE** octave of 8 keys from C to C, there are **TWO** sets of black keys. The first set are C# and D#. The second set includes **THREE** keys -- F#, G#, and A#. Altogether there are **FIVE** black keys in the *C octave*. Those **FIVE** black keys, plus **EIGHT** white keys is a total of **THIRTEEN** keys per single octave. (Note, by the way, that logically, *any* sequence of 13 adjacent keys will include the same total number of black and white keys, albeit with different specific placement of those keys *within* each musical key.)

The *Fibonacci Series*, therefore, is exemplified in *every octave* of the keyboard, *as follows*:

0, 1, 2, 3, 5, 8, and 13

There are many other fascinating details regarding the mathematics and theory of music. If you find the subject interesting, I encourage you to search a vast array of readily available books on the subject. I've attempted in this very short article to show you just a few of the *Biblical* insights and applications, and particularly some of the uncanny manifestations of the Fibonacci series in both the harmonic chords, as well as in the physical arrangement of keys on the modern musical keyboard.

---

<sup>1</sup>An ancient place of worship most often associated with pagan religions; it was usually built on an elevated location.

<sup>2</sup>The Holy Bible: Holman Christian standard version. (2009). Nashville: Holman Bible Publishers.

<sup>3</sup>Biblical Studies Press. (2006). The NET Bible First Edition; Bible. English. NET Bible.; The NET Bible. Biblical Studies Press.

<sup>4</sup>Ibid.

<sup>5</sup>Ibid.

Ω



2014

- To be announced in the February newsletter, or earlier, at: <http://www.csama.org/events.php>.

Ω

You must register for any safari.  
To register please call  
(816) 618-3610 or (816) 246-4517  
or visit:

<http://www.csama.org/Safarisignup.htm>

Astronomy safaris only, call:  
(913)-515-6421.

For detailed safari information:  
<http://www.csama.org/events.php>

### **Too far away to attend CSA meetings?**

### **Why not attend via audio or video tape?**

Attend CSA Meetings by ordering the audio (\$5) or video (\$13) copy.

A full list of what is available can be found in a link at:

[www.csamanewsletter.org](http://www.csamanewsletter.org)

To order, request by meeting date and topic. Copies of above items may also be borrowed from...

**The CSA Lending Library**  
**8904 Mastin**  
**Overland Park, KS 66212**  
**(913) 492-6545**

### **Are you participating in CSA as much as you should?**

*"The harvest is plentiful, but the laborers are few."*

Are you doing all the Lord has called you to do in the war for the minds and souls of our citizens... especially our youth? CSA is not a closed fraternity. Any born-again believer who is abiding in the words of Jesus, and has been gifted in research, computers, speaking, clerical activities, writing of articles or book reviews, etc., and who has heard a call to serve in an origins ministry should consider and pray about serving with us. Write or call for more information.

### **Help Wanted**

CSAMA is seeking an editor for, and contributors to, our newsletter. If you are a born-again Christian, believe the Bible is the infallible word of God, subscribe to the literal 7-day creationist viewpoint, if you have researching and writing skills, and if you have suitable ideas for articles to contribute to our publication and can meet a monthly deadline schedule, please contact the newsletter webmaster via the link at [www.csamanewsletter.org](http://www.csamanewsletter.org).

You are invited to attend all the monthly meetings, and as many of the safaris as you can fit into your schedule. Pass the word. Tell your friends and neighbors about CSAMA and our activities. Show them how to subscribe to the **CSAMA Newsletter**.

Never miss an opportunity to debunk the "millions-of-years" notion that evolutionists insist is necessary for life as we know it.

## Contact & Info Link

- Subscribe or manage subscription profile.
- View current and archived printable issues of CSA News.
- Download the CSA Creation Audiovisual Lending Library list.
- Get details about upcoming CSAMA events.
- Send questions, comments, suggestions to the editor.
- And more, via the CSAMA Newsletter website.

[www.csamanewsletter.org](http://www.csamanewsletter.org)

Quick unsubscription link at the bottom of the most recent newsletter.