



# ETCSA

East Tennessee Creation Science Association

Volume 2, Issue 5

## GRUNIONS

On certain nights during the spring and summer nights, sandy California beaches are the scene of a spectacular display put on by small silvery fish called the grunion. By the thousands these fish come out of the ocean to lay their eggs in the wet beach sand, in accordance with a most amazing and uncanny built-in clock. Indeed, a keen sense of timing is absolutely essential for their survival.

Of all the varieties of fish in the world, only the grunion show such spawning habits.

To understand some of the reasons why the sex life of the grunion is such a remarkable example of a "living clock," we need to consider some facts about ocean tides. First, there are two low tides and two high tides roughly every 25 hours. Second, the highest tides occur at the time of the full moon and at the time of the new moon (at intervals of about two weeks).

The grunion, with little variation, spawn at high tide on the second, third, and fourth nights after the full moon and after the new moon. This means that they are spawning after the time of the highest tides of the month (at a time when the high tides are declining).

Sand is carried away from beaches when tides are increasing, so the grunion spawn on nights and at that time of night when tides are declining and their eggs will be covered by sand. If they spawned at that time of the month or at that time of night when tides were getting higher, their eggs would be washed away by succeeding tides and grunion would become extinct.

Moreover, since it takes about nine days for their eggs to develop, they must spawn at a time when their eggs will have nine days in the sand before they are washed free. Eggs which are laid on the

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## DEVOTIONAL DECLARING THE UNKNOWN GOD

“As I . . . beheld your devotions, I found an altar with this inscription, TO THE UNKNOWN GOD. Whom therefore ye ignorantly worship, Him declare I unto you” (Acts 17:23). The people of Athens were known to be quite religious, worshipping a host of nature gods. They even had set up an altar “to the unknown god.” Paul pounced on this point of contact to declare unto them the God they didn’t know. He

starts by laying the foundation: This God, he claims, is the Creator. He not only “made the world and all things therein” (v.24), but also is “Lord of heaven and earth.” To cause to exist and then to rule over all of creation, one must be omnipotent. He is much too great to dwell in “temples made with hands.” How ludicrous to think He might need anything, including

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### Special points of interest:

- *May meeting: 18th, First Baptist Church, Concord, 7:00 PM, Fireside Room*
- *June Meeting: 22nd, First Baptist Church, Concord, 7:00 PM, Fireside Room*
- *July meeting: 20th, First Baptist Church, Concord, 7:00 PM, Fireside Room*
- *We have books, videos and tapes for sale! Check out our website for more details: [www.etcsa.org/](http://www.etcsa.org/)*

## What A Lunch! By Bob Zuvich

There is a certain planaria, or flatworm, called a microstomum. It eats hydra which are small underwater animals that have nematocysts on the "head" end. These nematocysts are for the purpose of catching prey. In hydras, they either contain a deadly stinger (penetrants), barbs (volvents), or an adhesive (glutinants) to grab the prey. The hydra is green and gets its color from the algae, which live in it. Just the nematocysts' chances of coming together by chance is enough to make the head of any evolutionist swim. There are over twenty types of different nematocysts, which have been described by science. The typical one consists of a tiny capsule called a cnidocyte, which has a material similar to chitin in it. The end of the capsule extends out to become a long filament, on the end of which are small dart-like projections, sometimes with barbs. Over the capsule is a cover called an operculum to encase it all nicely and neatly. On the outside of the capsule, at the top, is a hair trigger

## Jurassic Germs

Science News, vol 155, 6/12/99 Four years ago, a research team from Cal Tech found live bacteria in the guts of fossil insects trapped in amber; sort of like the insects mentioned in the film "Jurassic Park." Uniformitarian dating of the amber placed the bugs at 125mya. (million years ago)

Now, the same team led by Raul Cano has found and revived bacteria from small pockets of salt water in 250my old chunks of salt. Of course, this is far older than the Jurassic.

William Grant, of Univ of Leicester, says "You have to be certain [it]... is 250my old and not just 100,000 years old or not 20 yrs old." Could it really be off that much? Re-

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the worship of men, "seeing He giveth to all life, and breath, and all things" (v.25). This God "hath made of one blood all nations of men" and "hath determined the times before appointed, and the bounds of their habitation" (v.26). To know all men, their race, futures, and details of their lives, God must be omniscient, eternal, boundless. He has done this so "that they should seek the Lord" (v.27). He is not hard to find, for He is "not far from every one of us." He is the sustainer and source of all life. "In Him we live, and move, and have our being; . . . we are also His offspring" (v.28), totally

called a cnidocil. There is a pressure (osmotic) inside the capsule of 140 atmospheres. There is another pressure which rushes in (hydrostatic) the moment the hair trigger releases it. This pressure forces the filament out the lid and at the target. Then the weapon injects the barbs or poison into the prey or sticks to it to haul it in.

### The rest is history.

Just contemplating the concept of this complex organ coming into existence by chance is enough to make you dizzy! But there's more..... Nearly any animal that swims along and brushes into the cnidocil is caught-**except the planaria!** The planaria has the ability to eat the hydra **without setting off the nematocysts!** Then it turns around and uses those same nematocysts for its own defense! To account for this incredible set of machines in both the hydra and the planaria by natural selection and random mutations (mistakes) is absurd.

member that a chunk of salt looks the same, no matter how old it is.

Melanie Mormile of the Pacific Northwest National Laboratory says, "you've got to sit back and go, 'Wow, that's incredible. How can that be?'" I agree. That's incredible.

I might believe that spore encapsulated bacteria might be able to survive for say, 4000 years, but not for 250my. How could the complex organic compounds possibly last that long? Did they all just forget their basic organic chemistry? Don't these compounds just spontaneously fall apart into useless pieces over time? ... even if they are protected within a spore. Keep thinking. Sam Fox

unlike gods of "gold, or silver, or stone, graven by art and man's device" (v.29). But mankind has not known this God. He has been patient, but hates sin, and "commandeth all men every where to repent" (v.30), to gain forgiveness based on the work of "that man whom He hath ordained" (v.31) as a final sacrifice, or as righteous judge. We can be sure of this because, when the sacrifice was slain, God "raised Him from the dead" (v.31). Some mocked at the declaration of this mighty God (v.32); some refused to act; but others believed (v.34). John D Morris

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second, third, and fourth nights following the highest tides will usually hatch from one to three nights before the next highest tide. But if the grunion were to spawn later than these three nights, their eggs would be washed out before they were ready to hatch.

Finally, it is essential that the eggs hatch within a few minutes after they are agitated, but not until they are agitated. If the eggs hatched as soon as they got wet, they would probably hatch prematurely and the baby grunion would die. In nature, the vital agitation comes when the eggs are washed free from the sand by waves of rising tides.

Thus the grunion must take a multitude of factors into account in order to reproduce. No one knows the exact mechanism controlling the precise timing of the grunion, but precise it is. Without this timing, they would have little chance of survival as a species.

Yet how did the grunion acquire their incredible built-

in clock? If they "evolved" their sense of timing over thousands or millions of years, the grunion would have long ago become extinct! Remember, the timing must be almost perfect; the eggs must be laid at just the right time - just after the highest tide for that month - otherwise the eggs would be washed away before they could develop. And the eggs must develop in nine days so they will be ready to hatch when the next highest monthly tide comes in. If they aren't ready to hatch, the tide will take them away and they will die.

Truly the clockwork - like sex life of the grunion is an awesome spectacle. The grunion's incredible and intricate sense of timing is a powerful testimony to the handiwork of the Creator.

Mark Stewart



“...they must spawn at a time when their eggs will have nine days in the sand before they are washed free.”

## The Bible is FULL of mistakes

- The first mistake was when Eve doubted the Word of God the second mistake happened when her husband did too and mistake after mistake is still being made because people insist on doubting God's Word

- The Bible is FULL of contradictions  
It contradicts pride and prejudice  
it contradicts lust and lawlessness  
It contradicts your sin and mine

- The Bible is FILLED with failures  
because it is the record of people who failed many times  
there was Adam.  
there was Cain.  
there was Moses  
there was David and many, many others -  
but it is also the record of God's never-failing love

- God did NOT WRITE the Bible  
for people who want to play games with words  
for those who like to examine good without doing it  
for the man who does not believe because he does not want to

- Modern man has DISCARDED the teachings of the Bible for the same reasons other men have discarded it throughout history-  
woeful ignorance as to its true message and content determined  
apathy in refusing to consider its claims  
parroted pseudo-scholarship

posing as honest criticism

secret conviction that this Book is right and men are wrong

- Only an IGNORAMUS or PREJUDICED person would believe it  
teaches outmoded, irrational, unreasonable and archaic principles  
Is filled with hopeless discrepancies and unacceptable statements  
could only be the undirected, irrelevant, and uninspired work of mere men

- The Bible is, after all, only just another RELIGIOUS BOOK for thousands who do not dare be honest with themselves and God  
for those who are afraid to accept God's own challenge to honest examination  
for those unwilling to look in case it tells them what they are really like inside

- And YOU CANNOT UNDERSTAND or TRUST what the Bible says  
unless you are willing to consider the evidence and face up to the Author!

(by Winkie Pratney)



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**We're on the Web!**  
[www.etcsa.org/](http://www.etcsa.org/)



# ETCSA

“Set in the Defense of Creation Science”

## Answers in Genesis Seminar

### Session I

**Monday, May 22** – suggested ages: 10 & up

5:30-6:55 Doors open

6:00– film “From a Frog to a Prince”

6:30-6:50 Gospel music by Buddy Davis

6:55-8:15 Ken Ham (Can We Really Trust the Bible?  
Defending the Christian Faith in a “Scientific” Age!)

8:40-9:30 Dr. David Menton (Feathers and Flight!)

**Tuesday, May 23** – 9:30-11:00 a.m. Ken Ham

K-6 Student Meeting – (Dinosaurs, Genesis, and the  
Gospel plus dino film!)

1:00-2:30 p.m. – Ken Ham

Jr. High and Sr. High Student Meeting – (Evolution,  
Creation, and True Science plus Ark film!)

**Session II** – suggested ages: 13 & up

5:30-6:55 Doors open

6:00– film “The X-Nilo Show”

6:30-6:50 Gospel music by Buddy Davis

6:55-8:10 Ken Ham (The Origin of the ‘Races’ —  
The Genesis Answer to Racism)

8:40-9:30 Dr. David Menton (Beauty is Skin Deep!)

6:55-9:30 Creation Workshop #1, ages 7-10

**Session III** – suggested ages: 13 & up

**Wednesday, May 24** – 5:30-6:55 Doors open

6:00– film “The World that Perished”

6:30-6:50 Gospel music by Buddy Davis

6:55-8:15 Ken Ham (The Successful Keys to Witness  
to an Anti-God Culture!)

8:40-9:30 Dr. David Menton (Inherently Wind — A  
Hollywood History of the Scopes Trial)

6:55-9:30 Creation Workshop #2, ages 7-10

All sessions are free, except the Creation Workshop  
on Tuesday and Wednesday nights (\$15 per child for  
both nights) for reservations call (865) 691-8886

Buddy Davis will also have his display of life-sized  
dinosaur models!

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