SLABS & CABS
OFFICIAL BULLETIN OF THE GULF COAST GEM & MINERAL SOCIETY

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Volume 49 **Number 6** **Jun 2011**

Next Meetings

Board Meeting
5 July 2011
Downtown Library
6:00 PM– 9:00 PM

General meeting
19 July 2011
At the Shop
3933 North Timon Blvd.
On North Beach (across from Villa Del Sol)
Corpus Christi, Texas
6:30 PM

Membership Fees for 2011

Membership dues for 2011 are due in January 2011
We have 4 types of memberships and they are as follows:
Single $ 15.00
Spousal $ 20.00
Junior $ 5.00
This is for any member from the age of 6-17 years Of age
Honorary, Does Not Pay Dues
If Dues are Not Paid by the time of the Show you will **Forfeit Your Membership**
Sandra Hinkle , Membership Chairlady

Black Plume Agate
Woodward Ranch
Brewster County Texas

INSIDE

We are on-line
www.gcgms.org
Thanks to Chris Davis of Spurfire and Owen Hopkins For getting us back up and running! Take a look.

17 May Regular Meeting of the Gulf Coast Gem & Mineral Society

The meeting came to order at 7:05 PM with President Kevin Schleicher presiding.

Membership report: 80 regular members, 15 junior members and 11 honorary members. The minutes from the previous meeting were approved by a motion from Linda Simpson with Jerrold Simpson giving the second. The treasurer report was given by Gene Schade and it was approved after Dick Kline made the motion and Art Worley seconded.

The shop report was given by Mark Walbrink. He indicated the attendance has been down since the winter Texans left. He asked that any one interested in taking a class to contact him. Both his phone number and the number for Jerrold Simpson are in the Cabs & Slabs. Mark visited Highland Park Lapidary, in Austin. They are now making new equipment based on the old styles and we will be able to get the part we need to repair the Highland Park saw we have in the shop. Highland Park does have used saws for sale. There will be an OPEN HOUSE, at the shop, on the third Tuesday of the month. As everyone needs to know, the regular monthly meetings are suspended for the months of June, July and August. We hope to see everyone out.

There was no field trip report. John Anderson has agreed to be the new fieldtrip chairman.

Kyle Hinkle gave the education report. The first kids "Owen Hopkins" rock camp will be held June 23, 24, & 25, at the lapidary shop on Timmons St. on North Beach. Norma Trejo has been working to find patches and vests for the attendees. It appears these are very expensive. It has been decided by the rock camp committee to give certificates to the attendees at the end of the camp and then order the needed patches form the Federation. "T" shirts will be provided for the kids. Kyle commended Norma on her good job locating supplies and prices. There will be a meeting at the lapidary shop the coming Monday to work on the kids camp.

The show report was given. Gene reported all the bills have been paid and the show produced a good profit this year. The "Owen Hopkins" kids rock camp will be funded by the show profit.

Linda Simpson has been re-appointed to her position as Vice-President, District III of the South Central Federation of Mineral Societies.

The meeting was adjourned at 7:25 PM.

The door prizes and auction were held after the business meeting. The program was presented by Kyle Hinkle.

April Regular Meeting GCGMS Minutes

The meeting was brought to order by Suzi Nick at 7:00 Pm.

The membership report was given showing 81 adult, 21 youth and 11 honorary. The report was approved by the membership after a motion by Hank Swan with John Anderson doing the second.

The treasurer report was presented by Gene Shade. The report was approved by the membership after a motion by John Anderson and second by Hank Swan.

The shop report was given by Mark Walbrink. The attendance has been down lately. The shop will be closed Saturday for Easter.

There was no field trip report. We have been looking for a Field Trip Chairman since Mike McCraw moved to Florida. John Anderson agreed to be the Field Trip Chairman.

The show report was given. We are getting ready to send out contracts for next year. Donna Grimes said because it will be our 50th show, she would like to see a poster contest. She suggested two sections, one for junior members and one for adults. Anyone competing should make sure none of the information they submit is trade marked or copy wrighted.

Kyle Hinkle, Education Chairman, indicated the kids camp in June is a go. There will be a meeting 04/23/11 at the lapidary shop to work on the kids camp.

The meeting was adjourned at 7:45 PM.

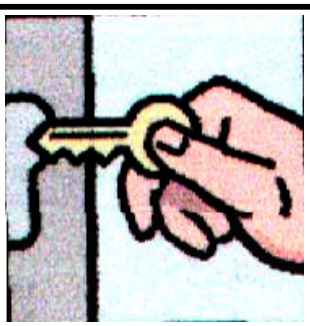
The door prizes and auction were held after the meeting. Linda Simpson presented the program on "State Rocks". Rocks were displayed on tables with numbers by each. The participants had a sheet with state names listed. The idea was to match the state with the rock numbers.

Respectfully submitted by Jerrold Simpson for Suzi Nick

GCGMS Lapidary Shop Rules

1. The lapidary shop equipment may not be used by anyone who has not signed a liability waiver.
2. Shop equipment use flat fee is $2.00 per hour. Sign in on arrival.
Pay Supervisor and sign out before leaving the shop.
3. "Open shop" hours are to be used only by those who have taken the cabochon class or have shown proficiency on the equipment.
4. All children under the age of 17 must be accom panied by an adult trained on the use of the equipment.
5. Supervisor must inspect rock "set-up" prior to anyone starting slab saw.
6. Long hair should be tied back, loose sleeve should be secured, and safety procedures followed.
7. Safety glasses are recommended and are the responsibility of the individual. Some are furnished by the GCGMS, or you may bring your own.
8. The last person to use a piece of equipment before the shop closes is responsible for cleaning that piece of equipment and the work area. This may include tabletop, sponges, aprons, catch trays, etc.
9. Shop Supervisor is the final authority on shop rules and usage.

Revised May 2009

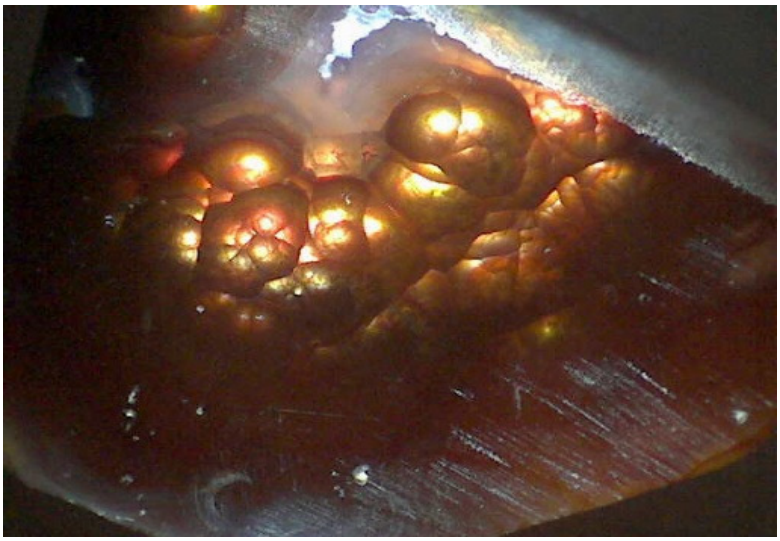


Those with keys to the Lapidary Shop are

Mark Wolbrink 361-991-2495 Shop Supervisor
Jerrold Simpson—361-851-8788
Cell - 361-877-3073
Hank Swan—361-993-9861/361-857-2405

Please call one of these when you would like to use the shop. They will not all be available at the same time, and once in a while none of them will be available Most of the time at least one of them should be able to work out a time and date the shop could be open for you. Remember the club has a lot of good equipment to use. Several different classes are being conducted on Monday evening from 6:00 PM to 9:00 PM. The shop is open during these times for use of the equipment even if you are not involved in a class. Shop is also open Saturday 9:00 Until Noon.

Fire Agate
From Mexico
Photo Taken at 10x Magnification



Gold Plume
Woodward Ranch
Brewster County Texas
Photo Taken at 10x Magnification

Any Articles, Minutes are other items not received by Thursday Morning 9:00 am After the Board Meeting. Will Not Be Published in That Months Newsletter.

Pearl Birthstone For June

Pearl is unique among the birthstones inasmuch as it is of organic origin. All other birthstones are minerals, inorganic solid substances with crystalline structures and fixed chemical compositions that vary only within rigid limits. Pearl are made up of little overlapping platelets of the mineral aragonite, a calcium carbonate that crystallizes in the orthorhombic system. Although the pearl itself is made up of a mineral, its organic origin excludes it from being included with minerals. Pearls have a fairly long geologic history---the oldest examples have been recorded from rocks of Triassic age in Hungary and the Cretaceous age in California but all had lost their luster. The oldest pearls with luster have been recorded from rocks of Eocene age in southern England.

Pearl is also unique inasmuch as it is probably the only gem material that can be utilized in jewelry immediately upon finding one. All other gems need to be fashioned and polished, however crudely, before they are set in jewelry. Pearls were exceedingly popular in Roman times and were cherished by Byzantine royalty. Robes and cloaks of the royalty may have been studded with thousands of pearls.

Pearls form in either salt or fresh water environments in several species of bivalves (clams) that are members of the Phylum Mollusca. The mollusk body plan involves a head, a foot, a visceral mass and mantle lobes that are carried about in a hard, calcium carbonate (calcite or aragonite) shell. Historically most of the pearls that were used in the jewelry trade came from the marine bivalves *Pinctada vulgaris* and *P. margaratifera* that were abundant in the Persian Gulf. The environmental conditions for these bivalves were ideal---the basin is about 15 - 20 m deep except for in its center. Divers who worked with small crews from small boats recovered the clams. When the pearl was recovered it was cleaned of mud and any organic matter. The pearl divers sold their harvest to dealers who delivered them to brokers in India who then bleached them of any stains with hydrogen peroxide. The pearls were size-sorted and graded and most were sold to dealers in Western Europe, mostly in Paris.

Fresh water pearls have been found in several species of clams that inhabit rivers in the United States. Most of these have been related to species of *Unio* and these are now becoming the basis of a fresh water cultured pearl industry in parts of the United States. Pearls form when an irritant becomes lodged between the mantle lobe and shell of the bivalve. The bivalve secretes layers of aragonite platelets around the irritant and this forms the pearl. If everything goes perfectly, the pearl nucleus will become separated from the shell and become completely surrounded by the mantle and the resultant growth will be a loose and spherical pearl. In some cases the nucleus does not become separated from the shell and the result is pearly blister on the inside of the shell. In cross section a pearl will appear to have concentric, smooth layers, but magnification will show these layers have an imbricate (brick wall-like) structure. These tiny plates are held together by an organic cementing agent called conchiolin. Magnification of the surface will show irregular lines that resemble topographic contours.

The pearl derives its iridescence from the diffraction and interference of white light that is caused by the tiny overlapping platelets of calcium carbonate. The iridescence or orient of the pearl is a function of the numbers and thickness of these platelets. Mother of pearl or nacre forms on the inner walls or inner surfaces of the mollusk shell. Mother of pearl differs from pearl inasmuch as it is part of the mollusk shell whereas the pearl has become a separate entity from the shell.
Several factors influence the value of pearl and these include color, luster, iridescence, shape, and size.

Large, spherical pearls are the most desired and fine examples can command very high prices. Popularity of pearl colors varies from place to place and culture to culture. Cream rose' and light rose colors are almost universally liked and pure white or pure yellow pearls are almost universally disliked but the many shades in between enjoy higher or lower status in various places in the world. Oblong, tear drop or flat pearls usually command lower premiums. Semi-translucent pearls with high luster are more desired than opaque pearls with low luster. Orient or iridescence are also very important in grading pearls. Strings of pearls are graded not only on the above criteria but also how well the colors and luster of the individual pearls match in the total piece.

Pearl substitutes have been made from various resins and plastics and some are quite attractive though nearly valueless. These usually have a much lower specific gravity than the natural or cultured pearl. The gemologist's problem is usually that of determining whether a pearl or strand of pearls is natural or cultured.

A cultured pearl is made by inserting a rounded bead of clam shell between the shell and mantle of the oyster. These beads were formerly manufactured in Muscatine, Iowa, where a large pearl button industry once flourished. The pearl culturing industry was pioneered in Japan where oysters of the species *Pinctada martensii* serve as hosts. The bead is inserted in oysters that are about three years old. The oysters are harvested in one to two years and the pearls are removed. The oyster secretes calcium carbonate around the bead at a rate ranging from about 0.1 to 0.2 mm per year.
Continued on Page 6 Although pearl farming began in Japan, the industry has spread to parts of Australia and American companies are working with culturing fresh water pearls.

The only sure way to separate a natural from a cultured pearl is by X-ray. Rubbing the pearls across the teeth, by candling them, or using tests such as specific gravity can not make such separations. Care of pearls is very important. Pearls can be easily discolored from skin oils. Properly strung pearls will have a knot between each pearl to keep them from rubbing together. The cultured pearl can be

Coming Events

Jul 6-10— Syracuse, NY: Combined **AFMS** and EFMLS Annual Convention and show, sponsored by the G&M Society of Syracuse; New York State Fairgrounds; **show dates** are July 9-10; <www.amfed.org>

August 27–28—Mountain Home, AR. Ozark Earth Science Rock, Mineral & Fossil Club Show. Senior Center in Cooper Park, 1101 Spring St. Info.—Ed Hakesley, 870/242-0956, edscamp3@yahoo.com, or www.earthscience.com.

Sep 3-4—ARLINGTON, TX: Annual show; Arlington Gem & Mineral Club; Arlington Convention Center, 1200 Ballpark Way; Sat. 10-6, Sun. 10-5; adults $6, seniors and children $3, Scouts in uniform free; silent auctions, Gem ID, Kids' Korner, door prizes, gem, lapidary and jewelry displays and demonstrations, Rock Food Table; contact Jack Spinks, 209 Overlook Dr., Midlothian, TX 76065, (214) 335-9452; e-mail: jlspinks@sbcglobal.net; Web site: www.agemclub.org

September 3–5—Silver City, NM. Grant County Rolling Stones Gem and Mineral Club 28th Annual Gem and Mineral Show. Grant County Business and Conference Center, Hwy 180 East. Info.—Marcia Andre, 575/534-0006, or http://rollingstonesgms.blogspot.com.

Oct 8-9—TEMPLE, TX: Annual show; Tri-City Gem & Mineral Society; Mayborn Convention Center, 3303 N. 3rd St.; Sat. 9-6, Sun. 10-5; adults $2; silent auctions, raffles, door prizes, grand prize, demonstrations, dealers, rough, slabs, cabs, faceted gems, equipment, finished jewelry; contact Chip Burnette, 2630 Polk St., Killeen, TX 76543, (254) 630-3573; e-mail: burnette@aceweb.com

Oct 8-9—FORT WORTH, TX: Annual show; LMRA Stone Steppers; Lockheed Martin Recreation Association, 3400 Bryant Irvin Rd.; Sat. 9-6, Sun. 9-6; free admission; rocks, gems, minerals, flinters, prospecting equipment, GPAA, jewelry, pottery, stained glass, children's activities; contact Steve Shearin, 860 Stafford Station Dr., Saginaw, TX 76131, (817) 733-5368; e-mail: steve.l.shearin@lmco.com

Friday, October 21 (9am-5pm), 2011 **Saturday, October 22** (10am-6pm) 2011
Sunday, October 23 (10am-5pm), 2011
Austin Gem and Mineral Society's Annual Gem and Mineral Show GEM CAPERS 2011 Austin, Texas
Location Palmer Events Center 900 Barton Springs Road Austin, Texas

Botswana Agates

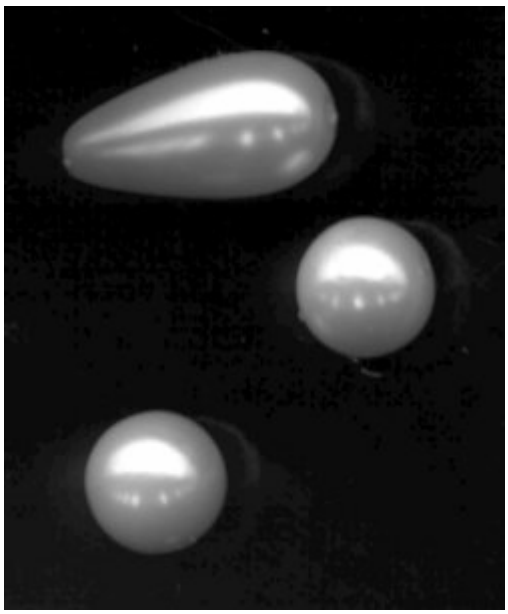
damaged by excessive wear that exposes the non-gem nucleus.

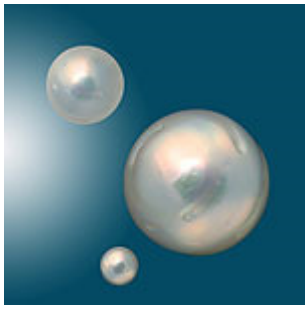
A **pearl** is a hard object produced within the soft tissue (specifically the mantle) of a living shelled mollusk, usually a conch. Just like the shell of a mollusk, a pearl is made up of calcium carbonate in minute crystalline form, which has been deposited in concentric layers. The ideal pearl is perfectly round and smooth, but many other shapes of pearls (baroque pearls) occur.

The finest quality natural pearls have been highly valued as gemstones and objects of beauty for many centuries, and because of this, the word pearl has become a metaphor for something very rare, fine, admirable, and valuable.

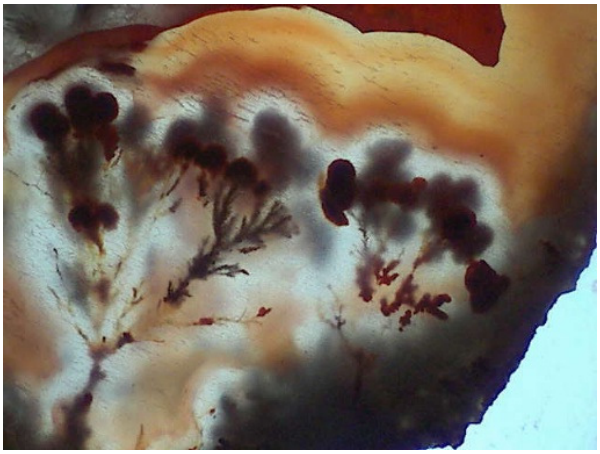
The most valuable pearls occur spontaneously in the wild, but they are extremely rare. These wild pearls are referred to as natural pearls. Cultured or farmed pearls from pearl oysters and freshwater mussels make up the majority of those that are currently sold. Imitation or fake pearls are also widely sold in inexpensive jewelry, but the quality of their iridescence is usually very poor, and generally speaking, artificial pearls are easily distinguished from genuine pearls. Pearls have been harvested and cultivated primarily for use in jewelry, but in the past they were also stitched onto lavish clothing. Pearls have also been crushed and used in cosmetics, medicines, and in paint formulations.

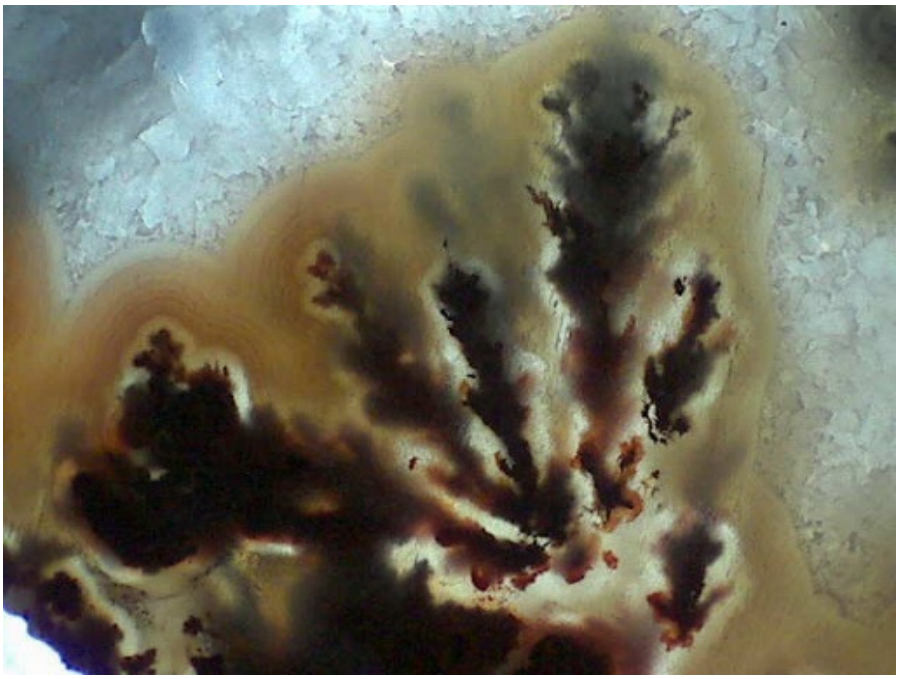
Pearls that are considered to be of gemstone quality are almost always nacreous and iridescent, wild or cultured, like the interior of the shell that produces them. However, almost all species of shelled mollusks are capable of producing pearls (formerly referred to as "calcareous concretions" by some sources) of lesser shine or less spherical shape. Although these may also be legitimately referred to as "pearls" by gemological labs and also under U.S. Federal Trade Commission rules and are formed in the same way, most of them have no value, except as curios.





Black Plume Agate
Photo Taken @ 10X and Backlited
Woodward Ranch
Brewster County Texas





Black Plume Agate
Photo Taken @ 10X and Backlited
Woodward Ranch
Brewster County Texas

Fossils

fos·sil noun **fäsəl/** **fossils, plural**
The remains or impression of a prehistoric organism preserved in petrified form or as a mold or cast in rock

An antiquated or stubbornly unchanging person or thing
he can be a cantankerous old *fossil* at times

A word or phrase that has become obsolete except in set phrases or forms, e.g., hue in hue and cry

Web definitions
dodo: someone whose style is out of fashion
the remains (or an impression) of a plant or animal that existed in a past geological age and that has been excavated from the soil
characteristic of a fossil
wordnetweb.princeton.edu/perl/webwn
Fossils (from Latin fossus, literally "having been dug up") are the preserved remains or traces of animals, plants, and other organisms from the remote past. …
en.wikipedia.org/wiki/Fossil
A very good location on the web for kids to learn about fossils
/www.fossilsforkids.com/Website_Directory.html

Related phrases

derived fossil: A fossil redeposited in a sediment that is younger than the one in which it first occurred

fossil fuel: A natural fuel such as coal or gas, formed in the geological past from the remains of living organisms

fossil ivory: Ivory from the tusks of a mammoth

index fossil: A fossil that is useful for dating and correlating the strata in which it is found

trace fossil: A fossil of a footprint, trail, burrow, or other trace of an animal rather than of the animal itself

The modern use of the word 'fossil' refers to the physical evidence of former life from a period of time prior to recorded human history. This prehistoric evidence includes the fossilized remains of living organisms, impressions and moulds of their physical form, and marks/traces created in the sediment by their activities. There is no universally agreed age at which the evidence can be termed fossilized, however it's broadly understood to encompass anything more than a few thousand years old. Such a definition includes our prehistoric human ancestry and the ice age fauna (e.g. mammoths) as well as more ancient fossil groups such as the dinosaurs, ammonites and trilobites. The earliest reported fossil discoveries date from 3.5 billion years ago, however it wasn't until approximately 600 million years ago that complex multi-cellular life began to enter the fossil record, **and for the purposes of fossil hunting the majority of effort is directed towards fossils of this age and younger.**

Fossils occur commonly around the world although just a small proportion of life makes it into the fossil record. Most living organisms simply decay without trace after death as natural processes recycle their soft tissues and even hard parts such as bone and shell. Thus, the abundance of fossils in the geological record reflects the frequency of favorable conditions where preservation is possible, the immense number of organisms that have lived, and the vast length of time over which the rocks have accumulated.

How do fossils form?

The term 'fossilization' refers to a variety of often complex processes that enable the preservation of organic remains within the geological record. It frequently includes the following conditions: rapid and permanent burial/entombment - protecting the specimen from environmental or biological disturbance; oxygen deprivation - limiting the extent of decay and also biological activity/scavenging; continued sediment accumulation as opposed to an eroding surface - ensuring the organism remains buried in the long-term; and the absence of excessive heating or compression which might otherwise destroy it.

Fossil evidence is typically preserved within sediments deposited beneath water, partly because the conditions outlined above occur more frequently in these environments, and also because the majority of the Earth's surface is covered by water (70%+). Even fossils derived from land, including dinosaur bones and organisms preserved within amber (fossilized tree resin) were ultimately preserved in sediments deposited beneath water i.e. in wetlands, lakes, rivers, estuaries or swept out to sea.

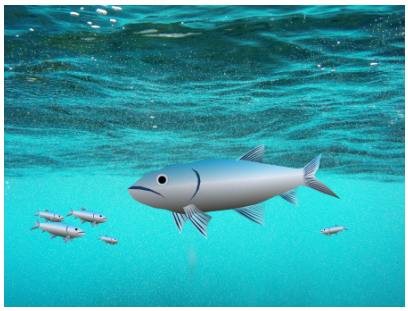
Fossilization can also occur on land, albeit to a far lesser extent, and includes (for example) specimens that have undergone mummification in the sterile atmosphere of a cave or desert. However in reality these examples are only a delay to decomposition rather than a lasting mode of fossilization and specimens require permanent storage in a climate controlled environment in order to limit its affects.

In the following example a fish is used to illustrate the stages associated with fossilization within off-shore marine sediments. This is just one summarized example, in reality there are countless scenarios that create the conditions necessary for fossilization in marine sediments.

Death

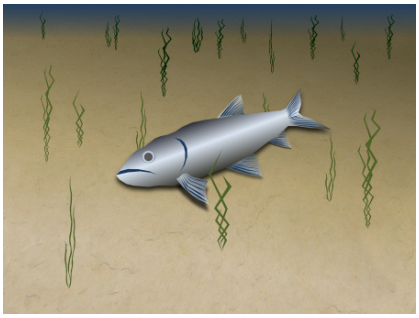
Having reached adulthood and returned to its birth place to spawn, this particular fish reaches the end of its life and dies. Soon after death the body of the fish becomes water-logged and sinks to the

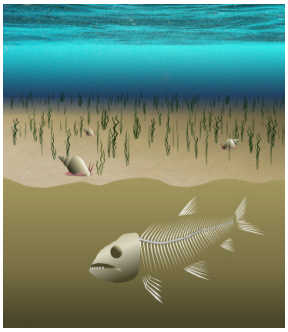
seafloor (note that quite often the gases produced during decomposition cause the carcass to float back to the surface, so the final resting place may be some distance away). More often than not the carcass would be pulled apart and scattered by scavenging crustaceans and other fish, however on this occasion the absence of any large scavengers leaves the fish relatively undisturbed.



Left: A fish returns to its birth place to spawn. Right: Having spawned the fish dies and shortly after sinks to the seafloor.

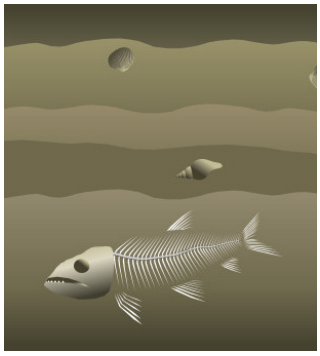
Although fossils can be found in sediments deposited in turbulent (high energy) environments near the coastline, complete/articulated skeletons require undisturbed conditions. A quiet seafloor with minimal light, low oxygen levels and a soft muddy composition are among the conditions suitable for preserving organic remains.





Decay and burial

After several weeks the fish is partially decomposed. Despite the calm conditions on the seafloor, several thousand meters into the bedrock pressure is building along an active geological fault. Suddenly the stressed rock slips, sending shockwaves to the rock above and causing the sediment nearby to mobilize. The mobile sediment travels across the seafloor burying the fish in the process, in what is often termed a rapid burial event. Once entombed beneath the sediment the remaining flesh and soft tissue are broken down by bacteria, leaving just the skeleton in the position of burial.



Left: After several weeks the soft body tissues have mostly decayed.
Right: Tectonic activity induces nearby sediment to mobilize, burying the fish in the event.

Rapid burial is a common component for optimal fossilization, as prolonged exposure would otherwise increase the likelihood of disturbance from scavengers and/or currents. Burial may also occur quickly if a high volume of sediment is deposited in the area following a period of heavy rain that delivers sediment from major rivers (for example).

Sediment accumulation and permineralisation

Over time the skeleton is gradually buried deeper by accumulating sediment. Slowly the weight of the sediment compacts the underlying areas, pressing the grains together, driving excess water out, and depositing minerals in the pores, and ultimately turning the soft sediment to hard rock - a process known as lithification.

As this process takes place, minerals contained within the water saturated sediment replace the original minerals in the skeleton and fill any voids formed as parts of the skeleton dissolve. The process of mineral replacement is known as permineralisation and results in a remineralised copy of the original skeleton.

Left: Several months pass and all that remains of the buried fish is its skeleton.
Right: As times passes more sediment accumulates above the fish and the skeleton is gradually compressed and permineralised.

Uplift and exposure

Many millions of years pass and the rock remains buried deep within the bedrock; however tectonic forces associated with the collision between neighboring continental plates have begun to buckle and uplift the bedrock, raising it above sea level and exposing it to erosion. Gradually, the exposed rock is stripped away, until eventually the top of the fish's skull is visible at the surface.

Scottish Agates
From Angus Scotland
These Were Taken With The Digital Blue Microscope
@ 10X Magnification

GULF COAST GEM & MINERAL SOCIETY, INC.
P.O. Box 60781 Corpus Christi, TX 78466

MEMBER of	American Federation of Mineralogical Societies; South Central Federation of Mineral Societies, Inc
Meeting	Held the third Tuesday of each month at 6:30 pm at the museum of Science & History 1900 North Chaparral September through May, and at the Lapidary Shop 3933 Timon Blvd., Corpus Christi TX for June through August.
Membership Fees	Individual $15.00 Couples $20.00 Junior (under 17) $5.00
2011 Officers	President: Kevin Schleicher Vice President: Kyle Hinkle Past President: Suzy Nick Secretary: Suzy Nick Treasurer: Gene Schade gene@casadeoro.net
Board Appointees	Membership: Sandra Hinkle Education: Owen Hopkins Librarian: Linda Simpson Treasurer Gene Schade Show Chair: Jerrold Simpson Show Publicity: Donna Grimes Shop coordinator: Mark Wolbrink Field Trip Coordinator: John Anderson Dealer Chair: Jerrold Simpson
Standing Committies	Shop coordinator: Mark Wolbrink Federation Liaison: Linda Simpson Historiorn: Frances Marten Librarian Linda Simpson Communications: Suzy Nick Bulletin Editor; Art Worley Webmaster: Art Worley E-mail artleew@agates123.com Door Prizes; Gilbert Rodriguez Refreshment Hostess; Letty Rodriguez

Slabs & Cabs
Art Worley
2561 Rainttree Trail
Ingleside, TX 78362

Slabs & Cabs Awards

AFMS TROPHY 2003 SCFMS
BULLETIN AWARD SCMS
Small Bulletins 4th place

PUBLICATION
2nd 2002 **2001 1st**
2001-4th place AFMS
2000 9th place SCFMS
1999-8th place SCFMS
1999– 9th place (new editor) AFMS