THOSE WHO LIVE IN GLASS HOUSES STOW NO THRONES

MARK ARMITAGE*

Received 31 December 1993; Revised 7 April 1994

Abstract

Evolution is held to be a purely random mechanism which operates by chance. The possibility of an intelligent designer and director of the process of evolution is anathema to scientists who hold to this theory. To many, the presence of apparent design within the structure of biological organisms is purely coincidental, and may even be attributed to the organizational properties of the matter itself. The presence of three dimensionally symmetrical geometrical shapes such as squares and triangles is demonstrated, implying that an intelligent designer was behind the manufacture of biological diversity.

The premise behind the supposed mechanisms for evolutionary development and change states that all terrestrial biological life forms came about solely by chance random processes operating on matter, and then, once initiated, diversified globally into the many phyla we see today. This mechanism was governed, it is said, only by the "blind" guidance of natural selection and the undirected adaptation of organisms to the pressures of an ever changing environment over geologic time. The theory holds that no advanced intelligence could have directed these mechanisms or designed the basic biological structures that these mechanisms were able to "manipulate."

These structures and mechanisms it is postulated are purely random, could have taken one of many different forms and an apparent design inherent in them is strictly coincidental. The theory negates also that this "relentless march" of diversity could have taken place suddenly, or even over a few thousand years because the small genetic changes required for adaptation and diversity can only be "heaped up" over vast streches of time. "There was sufficient time and energy available for life's molecular combinations to arise from chemical alliances encouraged by the cyclically changing, energy-charged environment," say Margulis and Sagan (Margulis, Sagan 1986.)

They wax poetic with "Bacteria invented fermentation, the wheel in the form of the proton rotary motor, sulfur breathing, photosynthesis, and nitrogen fixation, long before our evolution." The primary pillars of evolution then, are chance and time. They alone must support the entire weight of chemical, biological and physical evolution. If one or both of the primary pillars of evolution are crumbled, the whole structure of evolution collapses.

A simple test for the possibility of intelligent guidance in biological diversity is to look for the presence or absence of complex geometrical shapes within the structure of the organisms in that diversity. Lack of geometric shapes such as squares and triangles would certainly not disprove the concept of intelligent design, but their presence presents severe difficulties for an explanation based on a purely mechanistic system of biological diversity. Their presence would crumble the pillar of chance.

Microscopic Design

It is said that a man's house is his castle, and man has certainly designed and manufactured many interesting living structures throughout human history, but few of these can rival the geometric beauty of the homes made by the diatoms. Diatoms (Fig. 1) have incredible beauty because they are symmetrical top to bottom, left to right and front to back. They come in many geometrical shapes, for example circles (Fig. 2), squares (Fig. 3), triangles (Fig. 4), ovals (Fig. 5), stars (Fig. 6), and rectangles (Fig. 7). No other organism that man knows of manufactures shells in such perfect geometrical shapes.

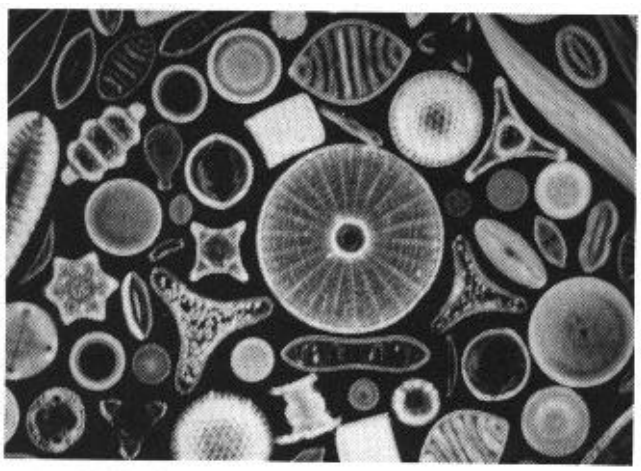

Figure 1. Diatoms in Darkfield, 125X.

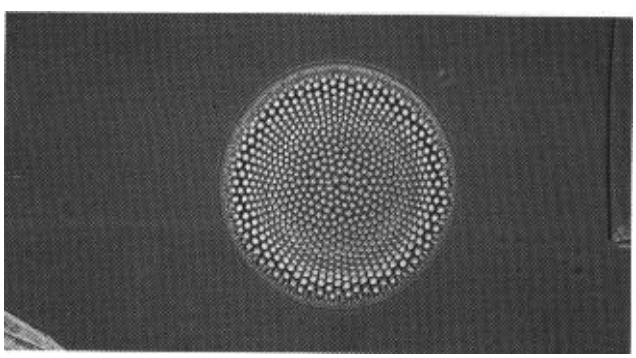

Figure 2. *Coscinoduscus elegans,* Nomarski 450X.

Diatoms, otherwise known as the Bacilliariophycea, are single celled planktonic algae that use the dissolved silica found naturally in seawater to fashion glass houses or tests to live inside of (Werner, 1977.)

There are generally two varieties, the pennate (or bilaterally symmetrical) and the centric (or radially symmetrical) diatoms (Figures 8, 9.) Their form comprises a matching together of a top and bottom like a

*Mark Armitage is the owner of Microspecialists, 587 Ventu Park Rd., Suite 304, Thousand Oaks, CA 91320.

tiny crystal pillbox, cemented together around the outside by a girdle. The single celled alga lives inside this container and either floats at the mercy of the currents or moves along a substrate via cytoplasmic streaming (pushing a part of the cytoplasm out through the pores in the test.) Some of the centric diatoms, such as Melosira varians produce flagellated male gametes with a whip like structure that they use to swim to the female gamete with (Lee, 1980.)

Only one other microorganism on earth manufactures its shell from silica, the radiolarian which is essentially a heterotrophic (non-photosynthetic) shelled amoeba.

Microscopic? Yes. But Primitive . . . ?

Most diatoms are tiny and cannot be seen by the naked eye. Averaging 25 microns in diameter, four of them will fit side by side across one of your hairs. (A human hair is about 100 microns in diameter.) In fact,

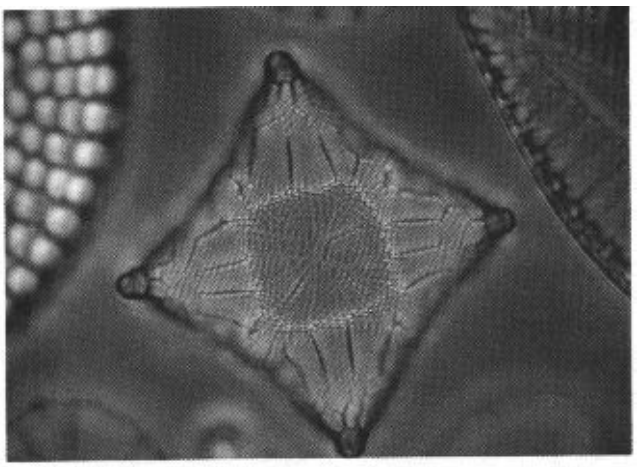

Figure 3. ***Triceratium*** **sp., Nomarski 450X.**

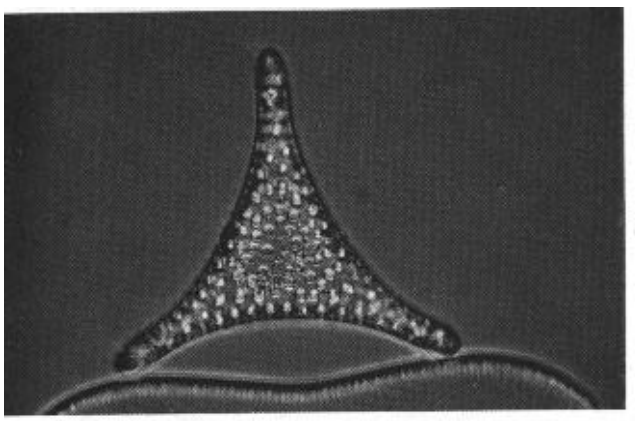

Figure 4. ***Triceratium pileolus,*** **Nomarski 450X.**

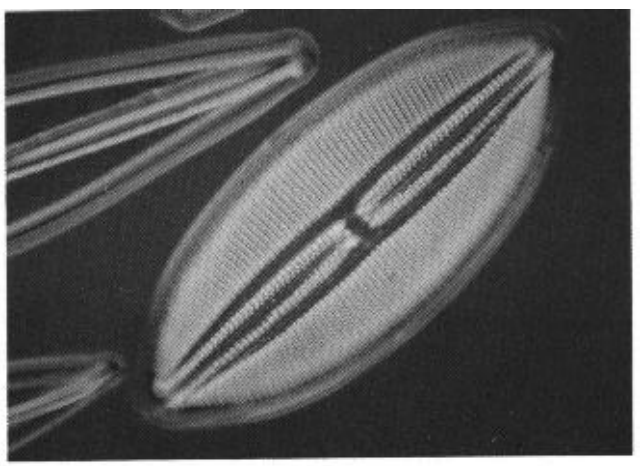

Figure 5. ***Navicula lyra,*** **Nomarski 450X.**

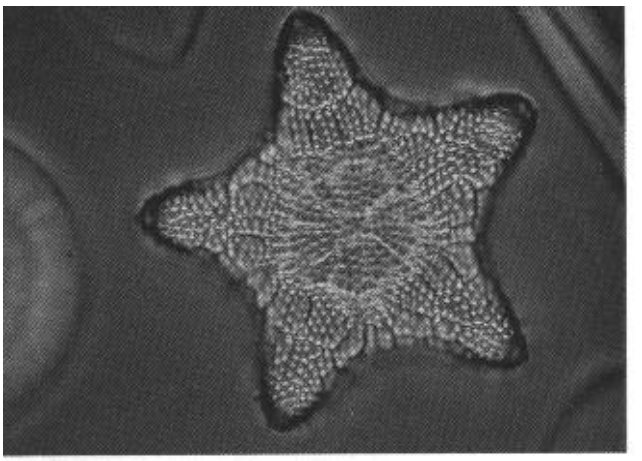

Figure 6. ***Triceratium pentacrinus,*** **Nomarski 450X.**

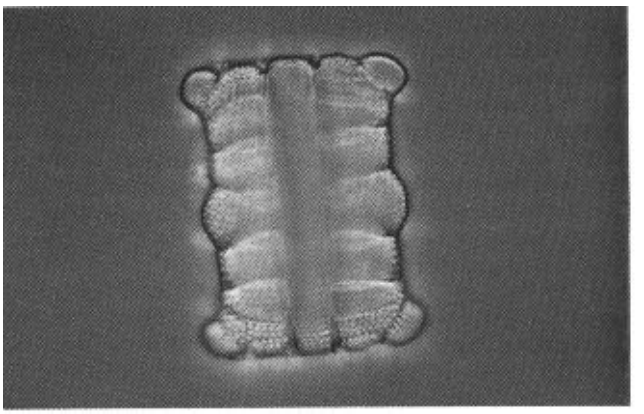

Figure 7. ***Biddulphia*** **sp., Nomarski 450X.**

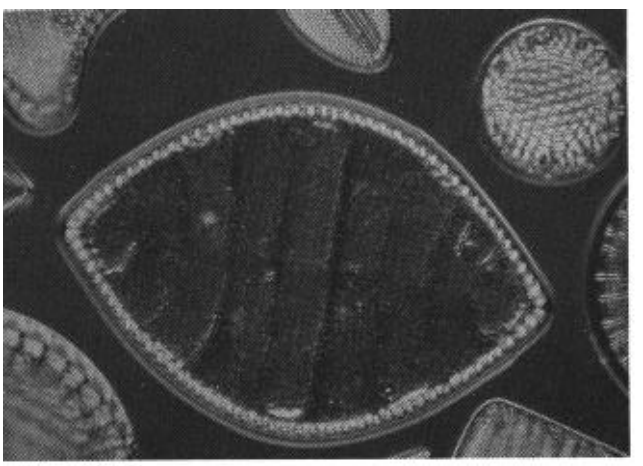

Figure 8. ***Cymatopleura elliptica,*** **Nomarski 450X.**

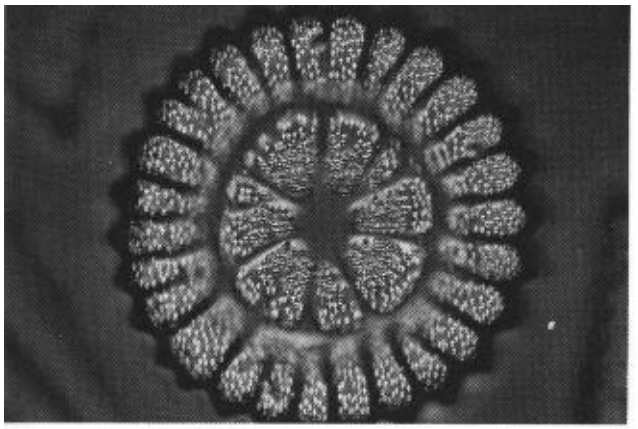

Figure 9. ***Cyclotella,*** **Nomarski 600X.**

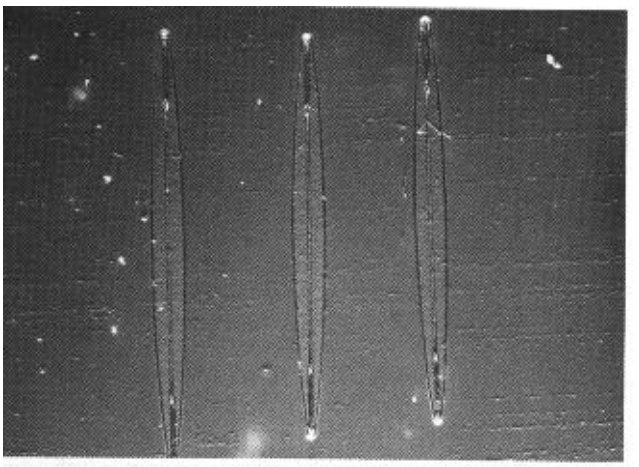

Figure 10. ***Amphipleura pellucida,*** **Nomarski 1200X.**

you cannot begin to see them clearly under the microscope until you reach at least 150X magnification. Diatoms as protists or single celled organisms, are placed at the "primitive" end of the plant kingdom by many authors.

Consider for a moment that these tiny wonders use glass, an inert silica compound to build their cell walls with. What other organism would ingest glass to develop a stronger skeleton or skin? Consider also that they synthesize extremely complex compounds that we still do not entirely understand, and that as autotrophs, they synthesize not only their own food but a very high quality oil as well (Round, 1989.)

As much as 10 percent or more of the cell can be composed of this oil. Some scientists are reluctant to call them primitive because once studied under the microscope one can see how intricate they are, and that few, if any, other organisms match their geometric beauty. Single celled protists are classified as procaryotic (without a defined nucleus), and eucaryotic (with a defined nucleus and other complex cell components). Diatoms are eucaryotic—just like the higher plant and animal cells. They are found in all aquatic areas on earth, and even though microscopic, they make up about 90% of all living organisms in the ocean! There are at least 10,000 different species (including fossil varieties,) and all of the differences have to do with the external shape of their test. They make up the major food component for many fish and other aquatic organisms, including some baleen whales which will feed for hours on them, straining them out of the water with their finely spaced teeth (Hutchins, 1966.)

Wanted Dead or Alive

Not only are diatoms incredibly complex and beautiful, they have become a major component of modern day life. Living, they serve as the foundation of the aquatic food chain. They are also responsible for the production of much of the earth's atmospheric oxygen, for most of the vitamin D found in fish oils and for the purification of fouled water supplies (Ford, 1976.) Huge fossil deposits of diatomite are found along the California coast, most notably at Lompoc where deposits range for miles at depths of up to 1400 feet. Santa Maria, California also has very deep deposits of up to 1000 feet deep. Other world wide deposits are found in France, Spain, Iceland and Mexico. Scientists are divided today on the possible mechanisms that could account for such localized deposits because once dead, most of the test silica redissolves into the seawater, (Lee, 1980,) and the majority of the diatoms found in these deposits have been crushed and splintered into tiny fragments.

This does not sound like the slow settling out of these tests in a warm shallow sea over many millions of years (Prescott, 1977.) What is certain is that countless billions of diatoms lived in the past. Many scientists think that they could even be responsible for much of the world's oil reserves due to the high quality oil they produce.

Although these deposits are fossilized, (i.e. other organisms found in the deposits have become mineralized,) the diatom tests have remained as pure silica and as such are extremely valuable (Bold, 1978.) Diatomite is used worldwide today as a highly effective filtration tool for the food, pharmaceutical, beverage, agricultural, plastics and solvent industries. It provides the sparkle and clarity in beer, wine and many fruit juices. Diatomite filters remove suspended solids from liquids without affecting the odor or taste of the beverage. It is used also in the production of vegetable oils, organic and inorganic chemicals, lube oils, and cane, beet and corn sugars. Safe drinking water and the clear water of swimming pools also result from diatomite filtration.

As a fine abrasive, diatomite is found in toothpaste, industrial cleansers and silver polish. Diatoms are used as a reflective in road marking, a filler in flat paints, as an insulator in temperature sensitive areas and as a buffer in the transport of dangerous explosives. They have also found their way into the booming biotechnology industry (Gest, 1987.) It has been found that certain microorganisms can be immobilized in a bed of diatomite, which will allow them to multiply rapidly into the billions and metabolize specific hazardous waste substances, leaving non toxic, disposable or recyclable materials. Finally, as any good microscopist will tell you, a good sample of Amphipleura pellucida under the microscope (Fig. 10), will quickly settle a dispute about the better of two microscope objectives, all to demonstrate that diatoms are as valuable dead as they are alive.

The perfect geometric shapes found in diatoms lead one to wonder if natural selection and the pressure to adapt to a changing environment alone can account for their dazzling beauty. Surely an intelligent designer programmed into their genetic code the ability to create superbly symmetrical three dimensional shapes such as these. As a scuba diver, I can readily appreciate all of the wonders that the sea has to offer. As a microscopist, I am thankful that I do not have built-in microscopic vision, for then I could never see the coral and fish for all the glass houses. As a Christian, I can clearly see that these tiniest of jewels, unlike many evolutionists today who worship the created thing rather than the Creator, make no thrones to sit upon and admire their own beauty, but rather, quietly speak volumes of the Creator's mighty power and intellect.

References

Bold, Harold C., and M. J. Wyne. 1978. Introduction to the algae. Harper and Row. New York.

Ford, Brian. 1976. Microbe power. Stein and Day. Briarcliff Manor. New York.

Gest, Howard. 1987. The world of microbes. Science Tech. Madison, WI.

Hutchins, Ross E. 1966. Plants without leaves. Dodd, Mead, & Co. New York.

Lee, Robert Edward. 1980. Phycology. Cambridge University Press. Cambridge.

Margulis, L. and D. Sagan. 1986. Microcosmos-four billion years of microbial evolution. Simon and Schuster. New York.

Prescott, Gerald W. 1977. The diatoms: a photomicrographic book. Coward, McCann and Geoghehan. New York.

Round, F. E. *et al.* 1989. Diatoms. Cambridge University Press. New York.

Werner, Dietrich, ed. 1977. The biology of diatoms. University of California Press. Berkeley.

MINUTES OF 1994 CREATION RESEARCH SOCIETY BOARD OF DIRECTORS MEETING

On Thursday, 14 April 1994, a meeting of the Executive Committee was held at the St. Michael's Hotel, Prescott, Arizona, from 2015 to 2245 hours to set up the agendas for the committee meetings on Friday. On Friday, 15 April 1994, between the hours of 0800 and 1700, the Constitution/Bylaws, Financial, Publications, Quarterly Editorial and Research Committees each held meetings of approximately two hours. The Chairman of each Committee recorded the business in preparation for the Saturday business meeting.

The Friday evening open meeting of the Creation Research Society was held at the First Baptist Church, Prescott, Arizona. Dr. Wayne Frair, President of C.R.S., welcomed everyone to the meeting. This was followed with a silent prayer. Dr. John Meyer, Director of the Van Andel Research Center (VARC), gave a report on the opening and activities of VARC. Dr. George Howe gave a report on recent publications and research. Dr. Emmett Williams gave a report on CRS Quarterlies and back issues.

A Minisymposium on Developments in Creation Science followed. Dr. Don DeYoung gave a presentation on "Michael Faraday: An Early Creationist." Dr. Russell Humphreys gave a presentation on the "Earth's Magnetic Field and the Genesis Flood." Dr. Duane Gish gave a presentation on "Jurassic Park: Fact or Fiction." The meeting was adjourned at 21:15 hours for refreshments, book sales and social discourse.

On Saturday, 16 April 1994, the closed business meeting of the Board (BOD) was called to order at 0815 hours. Present: T. Aufdemberge, E. Chaffin, D. DeYoung, W. Frair, R. Gentet, D. Gish, G. Howe, R. Humphreys, D. Kaufmann, L. Lester, R. Lumsden, J. Meyer, E. Williams, G. Wolfrom. Absent: D. Boylan, D. Rodabaugh, P. Zimmerman.

The minutes of the 1993 meeting were read and accepted. Secretary Kaufmann reported that the following were elected to the Board for a three-year term: E. Chaffin, L. Lester, R. Lumsden, D. Rodabaugh, G. Wolfrom.

The Treasurer's report by Gentet was given as follows: total income for 1993 was $121,299.31. Total expenses for 1993 were $329,846.79.

The Financial Secretary's report by Gentet was given as follows: for the year ending 1993, the total equity in investments was $406,207.94 and the balance in the VARC investment fund was $26,639.00.

The membership report by Wolfrom was given as follows: membership for 1993/94 was 1743 (652 voting, 735 sustaining, 320 subscribers and 36 students). This was an increase of 27 over 1992/93.

Editor DeYoung reported the following five-year summary of Quarterlies, June 1989-1994: 20 quarterlies, 902 pages, 97 articles, 60 reviews, 96 panoramas and a 50% article acceptance rate.

The Financial Committee report resulted in the following action. It was passed to separate all investment funds into VARC and General Funds. It was passed to have more than one signature on all investment documents. It was passed to develop a General CRS Budget (adjusted 93 figures to 94 budget) to be approved at BOD meetings for each calendar year. It was passed that the purpose of VARC be accepted in principle with further development to be handled by the Constitution/Bylaws Committee. It was passed that the maximal amount of money in the Chino Valley checking account be $4000 with the limit of an individual check written by the VARC Director to be $1000. It was passed that the honorarium checks for Meyer's presentations be made out to CRS. It was passed to acquire the mailing list of the Associates for Biblical Research for promotion of CRS membership. It was passed to allow Meyer to attend a Sharpe and Company Development Seminar for Fund Raising at a cost of about $1800. It was passed that 6% of the Director of VARC's salary be given to a retirement account. It was passed to give the Director of VARC a 3% cost-of-living raise starting 1 July 1994.

The Editorial Committee reported that former Editor DeYoung has agreed to be Book Review Editor for the coming year.

The Research Committee reported the following research projects in progress: Williams; Kanab Canyon, Pine Creek Gorge, Big Bend and Providence Canyon Studies, G. Howe; Structure of Cretaceous Wood, Haymond Formation, Pinene Studies and Alamosarus