

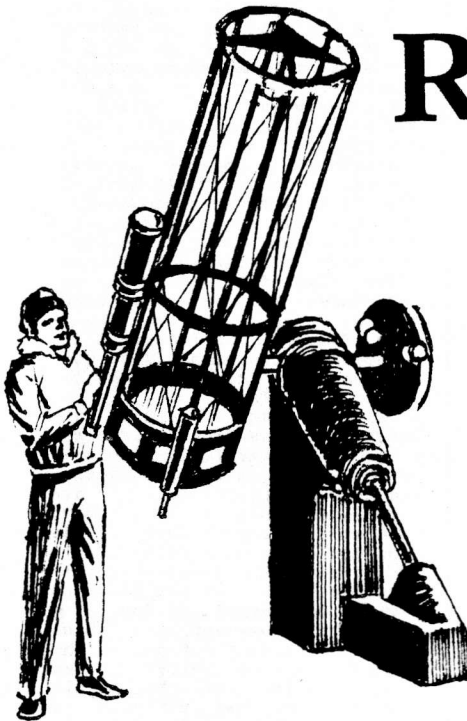
REFLECTIONS

of the

UNIVERSITY

LOWBROW

ASTRONOMERS



EDITOR: Jeffery Bass

vol. V no. I

PREVIEW

The next meeting of the University Lowbrow Astronomers is on Friday May 11 and will feature a talk by club member Roger Tanner on "The Scale of the Universe". Just how big is the universe and what new ideas have developed recently that have radically changed the astronomer's view of it? These topics and more will be discussed by Roger so don't miss it!

-- Jeff Bass

SLIDES

I'm currently putting together a slide presentation to be shown at local grade schools in my area. The purpose of the show is to reach out to these children and perhaps kindle their enthusiasm and wonder at the marvels of the universe. I need more SLIDES to produce an interesting and educational program.

If you have any slides that you would be willing to donate or sell to me I would appreciate hearing from you. Once completed, the show can be loaned out to anyone else who wants to present it in their area. Contact:

Gary Anderson
8191 Woodland Shore Lot 12
Brighton MI 48116

OFFICERS

After an incredibly suspenseful vote count, the results of the election of Lowbrow officers for the 5th Lowbrow year are in. Peter Challis will steer the club through the tumultuous year as President. The offices of Treasurer and Newsletter Editor were combined into one job which went to Jeffery Bass, while the office of Observatory Director fell, once again, to Tom Ryan. The addresses and phone numbers of the officers appear below (except Tom's because he is moving or getting married or whatever etc. etc.). A full list of the club membership will be published in a month or two after dues have been collected for the new year.

President:
Peter Challis
4104 Thornoaks
Ann Arbor, MI 48104
971-6186

Treasurer/Editor:
Jeffery Bass
1587-8 Beal Ave.
Ann Arbor, MI 48105
761-9712

DUES

Dues for the new Lowbrow Fiscal year are due now! Don't get out of touch with what's going on! Be sure to come to the next meeting and settle up

your account. Dues for the next 12 months are \$7.00 per person or \$10.00 per family. You can give your money to the Treasurer in person or you can mail it to: Jeffery Bass Treasurer/Editor 1587-8 Beal Ave. Ann Arbor, MI 48105.

Your dues cover the cost of printing and mailing the newsletter for a year, as well as providing a fund for the club to repair and improve the Peach Mountain observatory facilities.

FILTERS

Talking to a professional welder friend of mine, I learned of a type of filter that seems to be superior to glass in looking at bright objects such as the sun. It's a type of gold coated plastic that is easily available in most stores carrying welding supplies. It reflects infrared much better than glass and is thus much safer for your camera or eye. It comes in densities 10, 12 and 14 and a piece about 4" by 5" costs around \$6.00. The particular sample I have bears the name "Omniview" on the back, although the material is almost certainly marketed under several different brand names. Since many of us will be doing alot of solar viewing in the near future during the annular eclipse on May 30, this item may be of interest to you.

-- Roger Tanner

The Bible
and Science
by
Jeffery Bass

Conflicts between ideas in religion and science have been rife for centuries. Advances in the physical sciences has made it tempting to pick on religions because of their emphasis on things "unseen". Religious cosmologies and creation myths are particularly fertile topics on which the axe of physics and astronomy has fallen heavily.

But arguing against religious tenets based on scientific reasons betrays a lack of understanding of not only the real meaning and purpose of the religion, but also a lack of understanding in the circumstances and environment in which the roots of the religion were laid.

Some of us who have a background in astronomy tend to react to minor currents in contemporary religions, such as Fundamentalism, with an almost equally intense and misguided, though well intentioned, barrage of scientific objections (often based on physics) which usually results in a circus-like confrontation that merely serves to embarrass both parties and resolves nothing.

Some of us feel a sense of smug satisfaction, even superiority, in being able to shoot down the cosmology of, for instance, the Bible and thus by our own definition destroy the religion that produced the myth. The error in this particular approach towards a religion is in the tacit assumption that you are criticizing the religion "scientifically". However, the modern tools for which a comprehensive and penetrating understanding of religions and their origins lies not in the applications of physics or astronomy, but in other more suitable methods of inquiry. The most revealing research into the books of the Bible is accomplished by complex and interrelated techniques of literary and historical criticism.

Recognizing our limitations in a field that we really know little about, it is fascinating to look at the work done by more knowledgeable Bible scholars than ourselves and see what THEY have come up with.

Genesis

No book of the Bible (save Revelations) has caused more debate in recent years than the first book: Genesis. The various religious traditions believe this book, as well as the first 5 books of the Old Testament (the Pentateuch), to have been written by Moses.

There are many reasons for doubting this to have been the case. The main reason is that the first five books of the Bible disclose a sophisticated, well developed Jewish theology which certainly did not exist in Moses' day. From the time of the Exodus from Egypt (c. 1290 B.C.) to the establishment of Israel as a nation (c. 1000 B.C.) the development of Judaistic theology proceeded slowly and was transmitted down through the generations by oral tradition.

We must be careful not to regard the Old Testament from the point of view of Westerners. Today we rely on books, libraries, newspapers, and lecture notes, and assume that the people of antiquity must have done the same. Our slavery to the written word contrasts with the ancient Oriental whose power of memory was not debilitated by the literary crutches used by Westerners to educate themselves in forgetfulness.

The oral tradition was exceedingly important in ancient Israel, not only in the time before David but during the whole period covered by the Old Testament.

Israel struggled as a tribal confederacy at the end of the second millennium B.C. But during a period of political weakness in Egypt in the south and west and a similar waning of power to the east, Israel emerged as a "nation among nations", with an established monarchy under Saul and then David around 1000 B.C. It is at this moment that the first literary traditions appeared in Judaism. The impulse to write must have been furnished as it has in so many nations, ancient and modern, by the stirring events that brought the Hebrews upon the stage of history with a sense of national destiny.

During this period was written the so called "court histories" (II Samuel and I Kings describe the reign of David in almost modern, unbiased candor). Under Solomon's reign policies were introduced that began to undermine the Mosaic tradition. Out of this milieu emerged a person or group of people that scholars term the "Yahwist" point of view. It was the Yahwist's intention to rekindle the traditions of Moses and to redirect the nation Israel away from the secular road it was taking by setting down, in an epic literature, the story of the formation of God's (Yahweh's) covenant with Israel via Abraham, concluding with Moses' deliverance of God's people from Egypt to Canaan. The result of the Yahwist's efforts was the skeleton of what we know today as the Pentateuch, the first five books of the Bible.

The zenith of Israel's political power did not last long. After Solomon, the kingdom was divided and thereafter suffered a long, uninterrupted

decline (I and II Chronicles). Having suffered through the rise and fall of the Assyrian empire from 750 to 700 B.C. the worst was yet to come for Israel. With Egypt in a particularly sad state militarily, the Babylonian empire soared virtually unchallenged to greatness. In the process, much of the Middle East and North Africa was subjugated.

In 587 B.C. Israel as a nation-state was destroyed utterly by the Babylonians. The Davidic monarchy was crushed, and Jerusalem occupied. The great Temple built by Solomon was destroyed and several thousand Jews were taken into captivity and removed from Palestine.

This great dispersion and exile of Jews from their homeland was never fully recovered from even in later centuries and the effects of it are still plainly visible today; namely, that most Jews live in places other than Palestine.

This was the greatest catastrophe that had yet befallen the Chosen People of God. How was God's covenant with Israel to be kept in the face of the Babylonian captivity? The continuation of the Mosaic traditions had suffered a grave setback and was on the brink of extinction. Out of these rather desperate circumstances appeared a group of individuals which scholars term the "Priestly" viewpoint. These were men who, acquainted as they were with the complex Law and theology of Judaism, sought to preserve the very core of these beliefs with a body of doctrinal writings. These were added and edited into the Pentateuch. It is from the "Priestly Writer" that the Creation story comes; the first 10 chapters of Genesis.

The Priestly Writer stands within the worshipping community of Israel, which had been called into being by Gods marvelous deeds in the time of the Exodus and looks backward to the very beginning, to the Creation. From this point of view, the divine purpose follows a prearranged, systematic plan which unfolds in four successive periods, each marked by the dispensation of certain privileges and duties. It is sufficient to just look at one of these periods, the time of the Creation.

The Priestly Writer sets forth his understanding of the meaning of this first era in the Creation story (Gen. 1) which he supplements with the Yahwist's story of Paradise. In majesty of style and elegant thought, the Creation story is matched by few passages in the Bible. Its stately rhythms and sonority seem to reflect years of usage in the Temple, where it was no doubt solemnly recited and gradually assumed its present form of liturgical prose. In other words, although the story was written down during the Babylonian Exile, it reflects a long history of

liturgical usage and bears the marks of intense theological reflection over a period of many generations.

Anyone who is looking for a scientific account of the origin of the world can find plenty of discrepancies in the Priestly Creation story. To the scientific mind it is odd to hear that the earth was created before the sun, or that light was created before the heavenly lights; the sun, moon and the stars. It is fruitless to try to harmonize this account with modern science by saying, for instance, that the six creative days correspond to geologic periods, or that the creation of living things followed a pattern of evolution. The cosmology presupposed in the story was inherited from Israel's cultural environment. The universe was pictured as a three-storied structure: "heaven above, the earth beneath, and the water under the earth". The earth was conceived as having been formed by dividing "the waters from the waters" by raising up a solid substance, or firmament to hold the primeval ocean back. Thus the habitable world was surrounded on every hand by the chaotic waters which, unless checked by God's creative power, would destroy the earth (i.e. a Flood). In this respect, the Priestly Creation story has affinities with the cosmology presented in the Babylonian myth of Enuma Elish in which the creation of the universe resulted from a fierce struggle between the god Marduk and Tiamat, the dragon of watery chaos.

The theme of God's sovereignty over all his creation comes to its climactic expression in the account of the creation of Man ('adam). By placing this act last, the Priestly account shows that Man, understood corporately as "male and female", is the crown of God's creation.

The Paradise Story

This story is filled with images like the Tree of Life and the cunning serpent both of which are found in ancient folklore. Certainly, many details of the Paradise story were circulated as the storyteller's answer to several questions: why are men and women attracted to each other? Why does social propriety demand the wearing of clothes? Why must there be such pain in childbirth and the misery of hard work? Why do people hate snakes? The Paradise story bears many marks of an ancient popular tradition. But to the Priestly Writer as well as the Yahwist, the story deals with the deeper question of why man and woman, God's creatures, refuse to acknowledge the sovereignty of their Creator, with the result that history is a tragic story of banishment from the life for which they were intended.

The Priestly and Yahwist writers who fashioned much of the epic of Creation and of "primeval history" did not claim in their work the role of absolute authority for the information they divulged. Much recent modern "criticism" of this part of the Bible by laymen (this includes scientists) presupposes that the writers of the Pentateuch in fact DID make such claims of authority and what usually follows then is a string of arguments that disprove their story on scientific grounds. In fact, for the Yahwist, the Priestly Writer and the religious community that they were addressing, the authority for the truth of the Creation was assumed A PRIORI as a fact with no need for discussion. The details of Creation was not the burning issue for the ancient peoples of the Middle East as it is for us in the West today. They didn't care, really, about the details. It was OBVIOUS to anyone who cared to look around that the world was a divine creation. Who else but a mighty god could fashion the sun, the stars and the earth.

The Creation story in the Bible has as much to do with describing a comprehensive physical mechanism as astronomy has in predicting tooth decay. It was not the purpose of the Priestly Writer to satisfy a non-existent craving to know the details of the universe's workings, but to expound upon a subtle religious theme, namely the activity and purpose of God. To do this, it was necessary for the Yahwist and the Priestly writer to describe God's dealings with Israel in the larger context of human history.

To do this, a number of traditions were appropriated that can be paralleled in the folklore of antiquity. The motifs of creation, paradise, the flood, and the deliverance of mankind from total destruction (Noah) were expressed in various forms in the myths and legends of the ancient Near East. Most striking of all is the famous Epic of Gilgamesh, which relates how Gilgamesh, a legendary king who once ruled in Sumerian times, tried to find out the secret of immortality from the hero of the Flood, Utnapishtim. In Tablet XI of the epic, Utnapishtim vividly relates the story of how the gods capriciously decided to destroy mankind in a great flood. However, Ea, the god of wisdom, took it upon himself to advise Utnapishtim to build a large boat and take aboard the seed of all living things. Then the flood came with such destructive fury that "the gods cowered like dogs" and crouched against the walls of heaven, weeping about their decision to destroy mankind. The storm finally subsided on the seventh day, with the boat grounded on the top of Mount Nisir. Seven days later,

Utnapishtim sent forth a dove, a swallow, and because these birds found no resting place, a raven. Then he offered a sacrifice of such sweet savor on the mountaintop that "the gods crowded like flies" around it. The similarity of this ancient story to the biblical account shows that the Yahwist borrowed freely from the fund of popular tradition with no great concern for its exact contents, though he transformed the material in accordance with his theological perspective.

The stories concerning Creation and primeval history, then, cannot be regarded as exact, factual accounts of the sort that the modern historian or scientist demands, nor should they be judged as though they were intended as such. These stories are "historical" only in the sense that, as used by the Yahwist they communicate the "meaning" of history. The manner of presentation is pictorial and symbolic, for the writer is dealing with a subject that eludes the modern historian's investigation, namely, the ultimate source and purpose of the human drama.

SWAP MEET

The Detroit Astronomical Society will be hosting a Swap Meet at their headquarters at the Crowell Recreation Center in Detroit on Friday May 18 from 8:00-10:00 P.M. Those interested in participating are invited to bring any astronomy or science related paraphernalia you own and are interested in selling. This is a free service of the DAS.

Driving directions: Take 14 out of Ann Arbor east towards Detroit. 14 becomes I 96 the Jeffries Freeway. You pass I 275. You pass Telegraph Rd. and get into the right lane and exit on Outer Drive going north. You come to 5 Mile. Outer Drive becomes Lahser. You're almost there. Just 1/4 mile south of 6 Mile on the right (east) side of the road is the Crowell Recreation Center at 16630 Lahser. You're there.

For more information contact the Detroit Astronomical Society at 837-0130.

-- Jack Brisbin

ARTICLES

The international group known as the Plutonian Society, is looking for articles and/or short stories written by amateur and professional astronomers to publish in their bi-monthly newsletter the Plutonian Report, which has a readership of about 300 persons. The issue your article appears in will be mailed to your home. Send your articles to:

Gary Anderson
8191 Woodland Shore Lot 12
Brighton MI 48116

Monthly Meeting

MAY 11 7:30 p.m.

Detroit Observatory Classroom

program: Roger Tanner on
 "The Scale of
 the Universe".

club address:

MSA Office Michigan Union

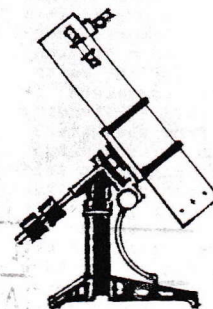
Ann Arbor, MI 48104

The deadline on submissions to Reflections for the June issue is June 1. Send your articles to:

Jeffery Bass/Editor
1587-8 Beal Ave.
Ann Arbor, MI 48105

All Lowbrow club members are invited to a Bachelor/Bachelorette party for club members Mike Potter and Tom Ryan and their spouses-to-be Peggy Nemoff and Helen Lungerhausen on Thursday, May 3 at Tom Ryans' house at 1517 E. Park Place near the corner of Stadium and Industrial. It starts at 7:00 P.M. A keg of beer will be provided although anything you bring will be welcome. Call Doug Nelle for details at 663-2080.

-- Doug Nelle



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