

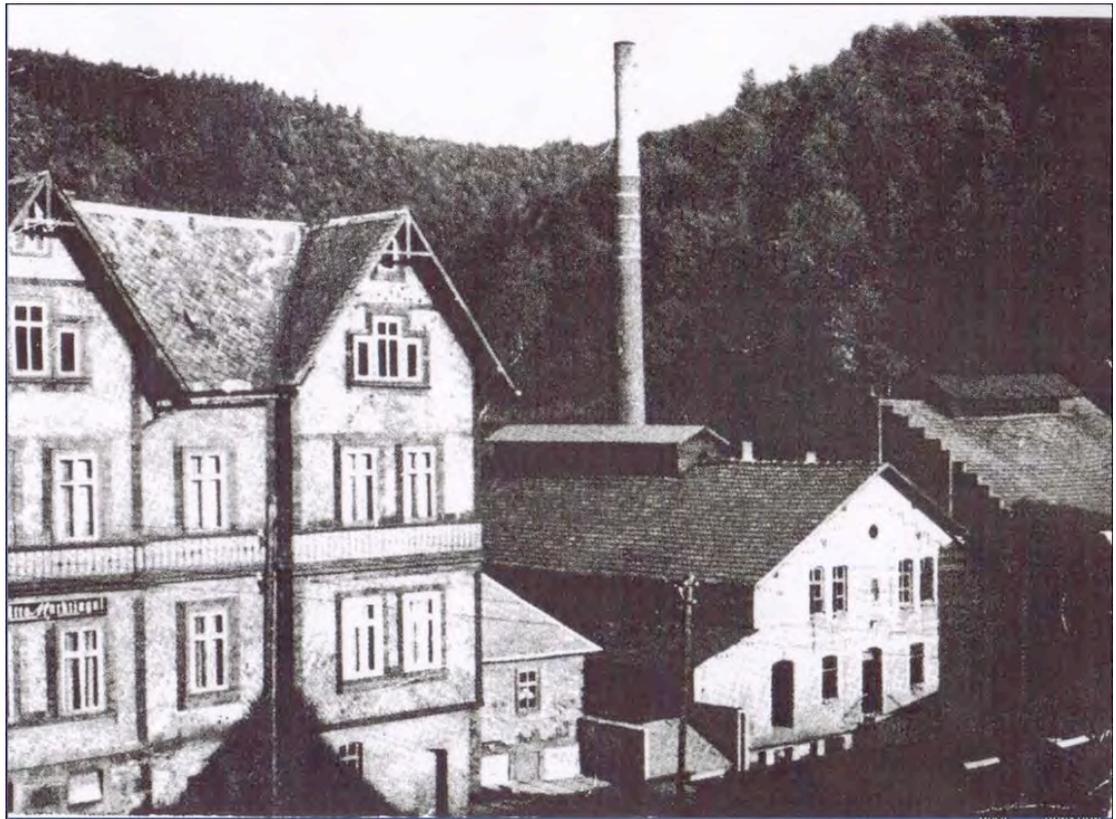
Ocular Prothetik Display Case, Lauscha, 2003¹⁶

Lauscha, Germany: Historic Images

¹⁶ Ibid.



Lauscha, Germany, circa 1900



Lauscha, Germany, circa 1900

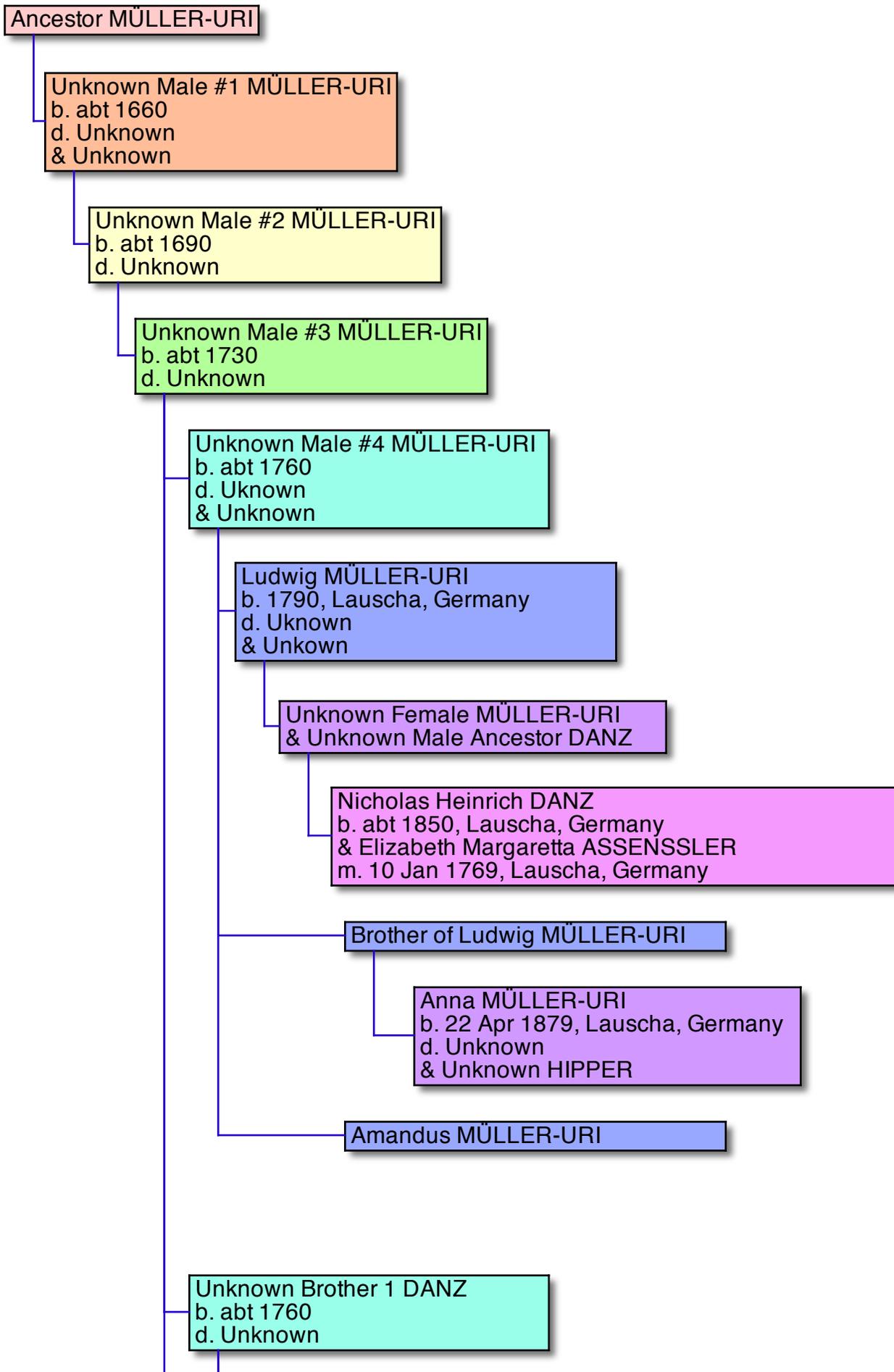


Glass furnaces, Lauscha, Germany

Chapter Three

Müller-Uri and Danz Family Tree

April 2015



Johann Michael DANZ
 b. 1780, Oberweissbach, Germany
 d. 1849
 & Johanna Dorothea BAZ
 b. 21 Apr 1785, Lauscha, Germany
 m. 1815, Lauscha, Germany

Johann Peter DANZ
 b. 1780, Oberweissbach, Germany
 d. 1816, Lauscha, Germany
 & Johanna Dorothea Sophia BAZ
 b. 21 Apr 1785, Lauscha, Germany
 d. 17 Nov 1849, Lauscha, Germany
 m. abt 1815, Lauscha, Germany

Carl Paul Casper Gunther DANZ
 b. 17 Feb 1816, Lauscha, Germany
 d. 1853
 & Sophia Henriette LEIPOLD
 b. Unknown, Lauscha, Germany
 d. 30 Oct 1853, Lauscha, Germany
 m. 22 Dec 1839, Lauscha, Germany

Julius Wilhelm DANZ
 b. 14 Nov 1842, Lauscha, Germany
 & Louise Greiner
 m. abt 1859

Septimus DANZ
 & Alwine

Gottlieb Theodore I DANZ
 b. 22 Apr 1879, Lauscha, Germany
 d. 1939, Los Angeles, California
 & Anna MÜLLER-HIPPER

Gottlieb Theodore II DANZ
 b. 1905, Lauscha, Germany
 d. 1975, San Francisco, CA
 & UNNAMED

Gottlieb Theodore III DANZ
 b. 1934, Los Angeles, CA
 d. 1978, San Francisco, CA

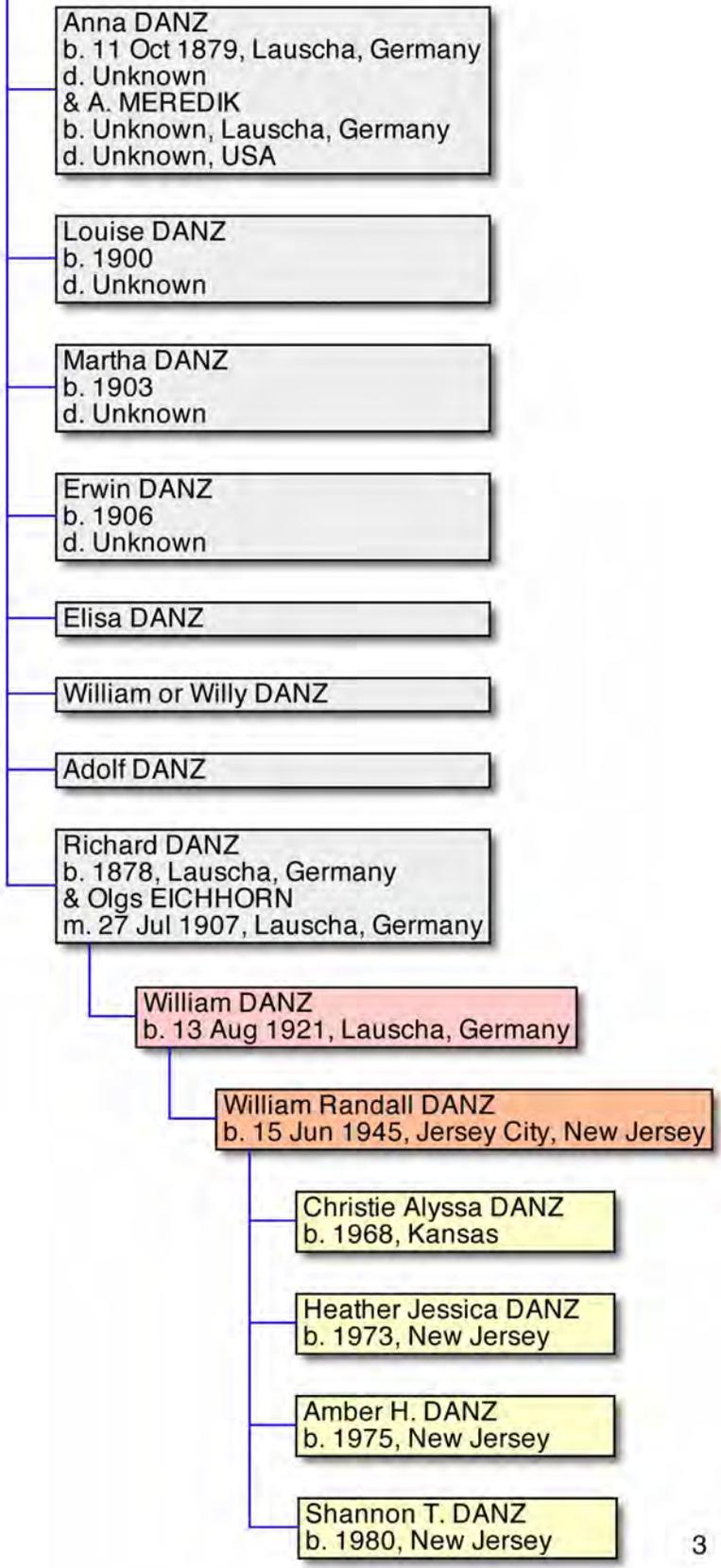
Phillip or Phil DANZ
 b. 1938, San Francisco, CA
 & Katha

Jeanne DANZ
 b. 1957, California

Janice L. DANZ
 b. 1959, California

William or Willie DANZ
 b. 18 Oct 1950,
 San Francisco, California
 & Bobbie

David DANZ
 b. 21 Apr 1978
 San Francisco, California
 & Brianna



Christopher Teodor Emil DANZ
 b. 21 Jan 1840, Lauscha, Germany
 d. 6 Jul 1895, Lauscha, Germany
 & Bianca Frederike Eleonore KÖHLER
 b. 29 Dec 1842, Lauscha, Germany
 d. 13 Dec 1920, Lauscha, Germany
 m. 10 Oct 1864, Lutheran Church, Lauscha, Germany

Christian Wilhelm DANZ
 b. 29 Sep 1862, Lauscha, Germany
 d. Unknown

Karoline Selinde Frederike DANZ
 b. 24 Oct 1864, Lauscha, Germany
 d. Unknown

Edmund Wilhelm Louis Ernst DANZ
 b. 22 Oct 1866, Lauscha, Germany
 d. Unknown

Louise Lucie DANZ
 b. 15 Dec 1868, Lauscha, Germany
 d. 1 Jul 1900, Lauscha, Germany

Auguste Caroline Louise DANZ
 b. 26 Jan 1871, Lauscha, Germany
 d. Unknown

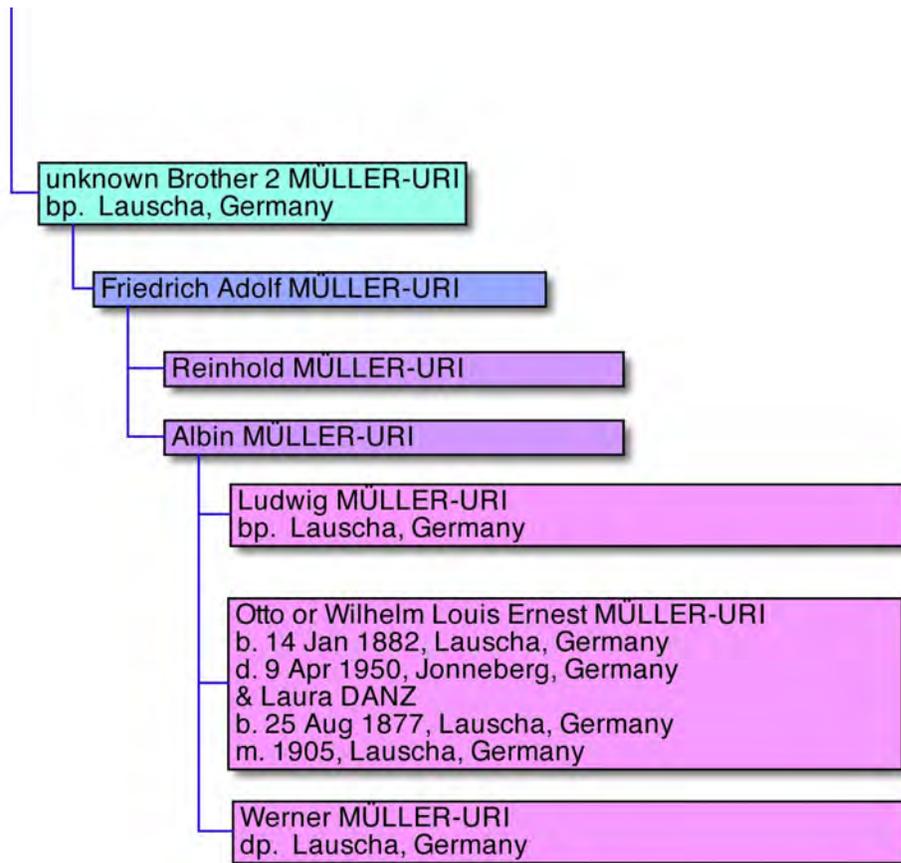
Septimus DANZ
 b. 19 May 1873, Lauscha, Germany
 & Alwine BOEHM
 m. 25 May 1896, Lutheran Church, Lauscha, Germany

Fredrich Ferdinand Richard DANZ
 b. 6 Jul 1875, Lauscha, Germany
 d. 1899, Lauscha, Germany

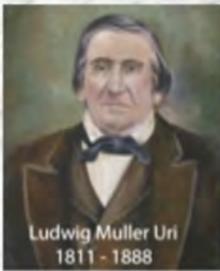
Johann Jacob DANZ
 & Elizabeth Catherine SCHOTT

JOHANN FREDERICK DANZ

NICHOLAS HEINRICH DANZ
 b. abt 1850
 & Elizabeth Catherine WEIDNER



Muller-Danz Family Ocularists 8 Generations



Ludwig Muller-Uri
1811 - 1888

Ludwig Muller-Uri



Gottlieb Theodore Danz I



Gottlieb Theodore Danz II



Richard Danz



Philip A. Danz



William A. Danz



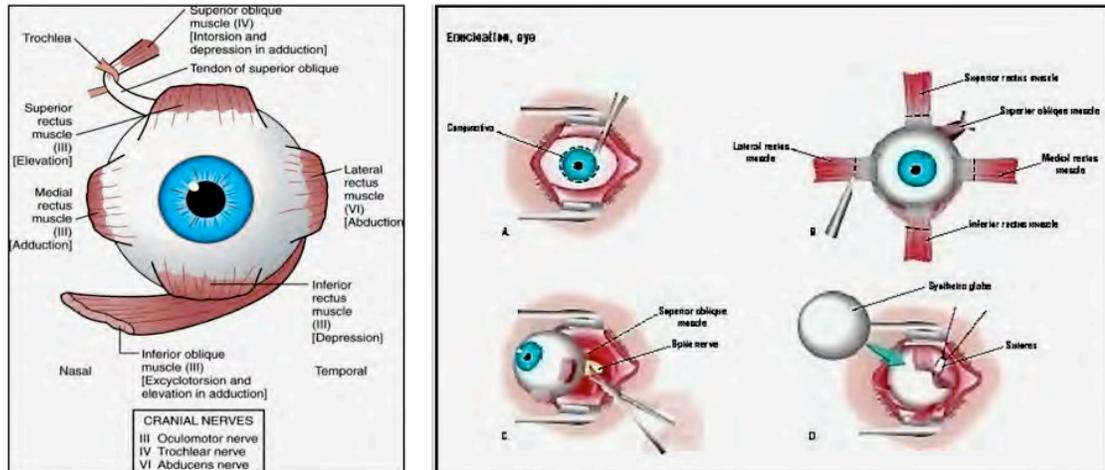
William Randall Danz



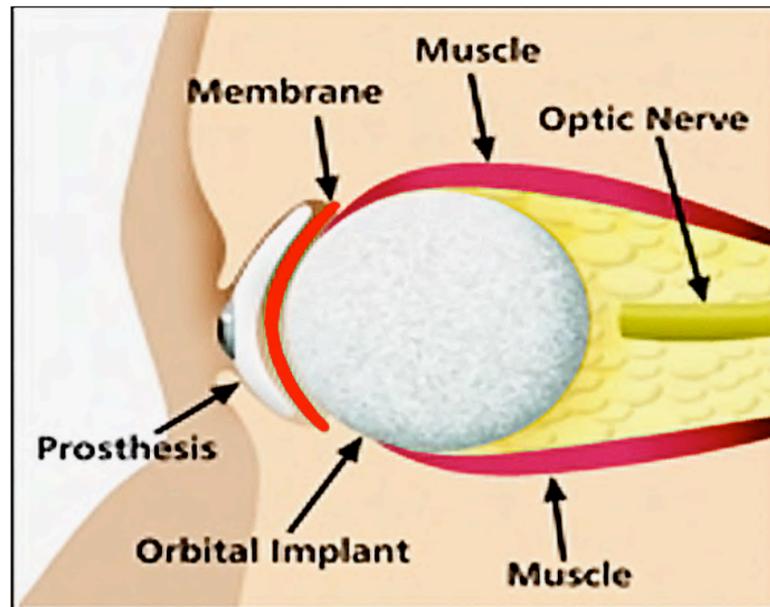
Heather Danz

Chapter Four

Surgical Enucleation Basic Techniques Displayed Graphically¹⁷



After the 6 extra-ocular muscles are surgically identified, they are detached from the sclera. To maintain a full orbital socket and improve the mobility of the external ocular prosthetic, it is advisable to implant an orbital device within the muscle cone to which the 4 rectus muscles can be reattached. Precise surgical dissection and minimal trauma afford the patient superior comfort and fit of the prosthetic, as well as much improved ocular motility.



Placement of Orbital Implant and Ocular Prosthesis

Chapter Five

Ancient Egyptian Funeral Practices

Robert S. Sherins, MD

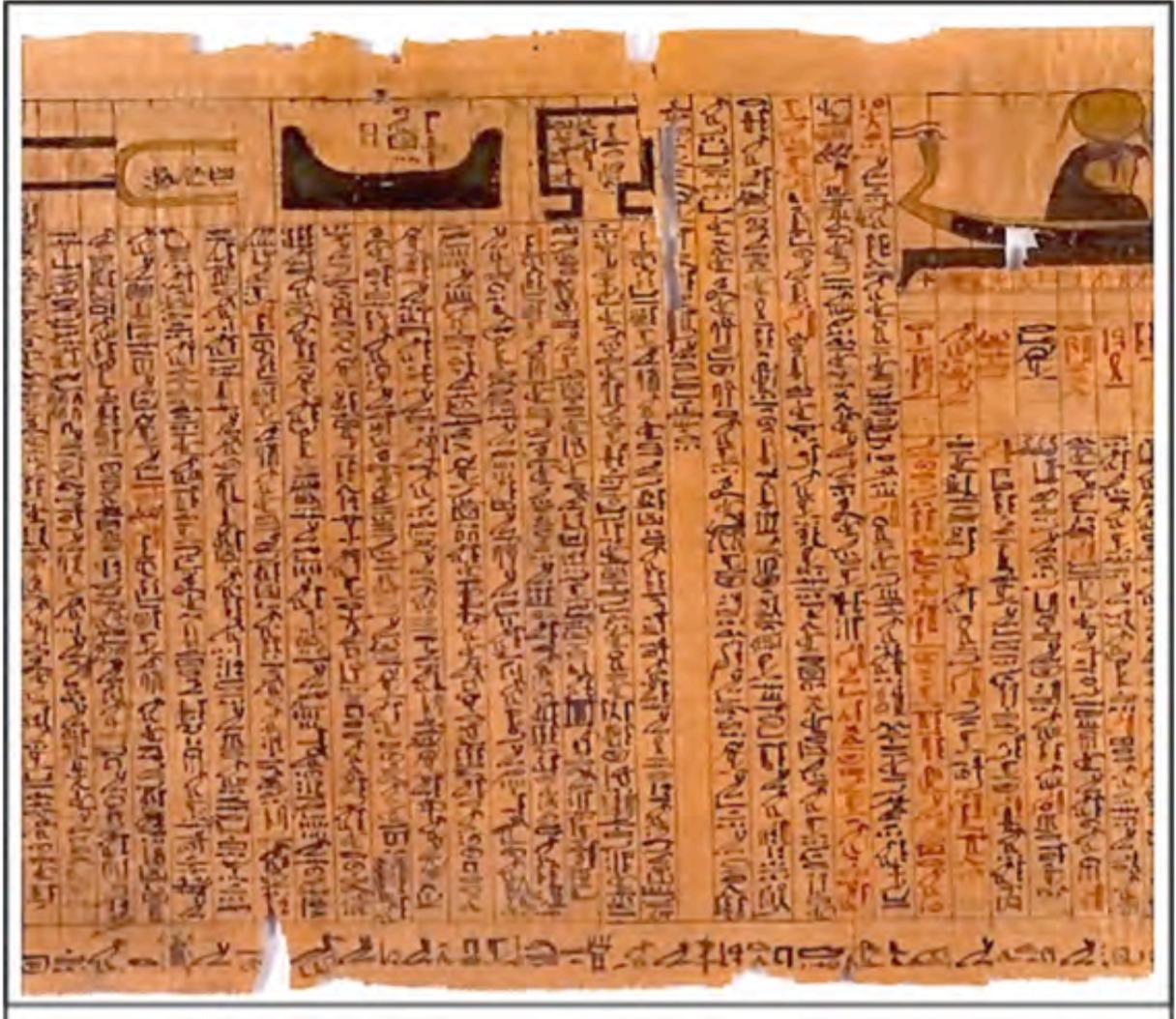
On the reliefs inscribed on ancient Egyptian temples and tombs were written the life stories describing its Pharaohs and nobility. The information was written in graphic hieroglyphic characters imbedded into the stone. Like a brag sheet, the information documented the accomplishments of Egypt's monarchs. Too little was revealed about the culture and spirituality of the era. However, among the many papyri discovered were the greatly detailed documents known as the "Book of the Dead." It was among the funeral ceremonial procedures that the ancient Egyptian society revealed its spirituality and cultural practices.

From my research of the historical Egyptian culture, I discovered that the concepts had originated from far earlier ancient times, such as the Nubian (Cush/Sudan) era of **Pre-dynastic Egypt**, circa 3,000 – 6,000 BCE. This was a much earlier era than the estimated date of the Patriarch Abraham (circa 1,800 BCE). In Pre-Dynastic Nubia, burial customs avoided cremation and concentrated on preserving the corpses. The earliest burials were in shallow and simple graves. Later on the bodies were placed in wicker baskets in the grave; still later, burials took place in coffins and the graves included jewelry and personal items for the afterlife.

Elements of Egyptian culture also can be traced to the pre-Hindu era - the Ayurveda of India. Vedic information was written in Sanskrit. It is known that the Ayurveda and Hindus had early and significant commercial exchanges in the Middle East. It would seem that in addition to the commercial exchanges there was a process of the merging of its culture and spiritual concepts.

In addition, I discovered several of the ancient concepts were imbedded in our modern culture. Elements of the ceremonial procedures and superstitions appeared later on in both Hebrew and Christian religious practices. This will be summarized as we explore the ancient documents and graphic images.

Egyptian Book of the Dead



Oldest section from the Egyptian "Book of the Dead"
The complete papyrus document measured 25 feet in length



Eye of Horus – Symbol of the God of Protection - circa 2,000 BCE



Anubis (Jackal) Examines Deceased Pharaoh in the Temple

Ancient Egyptian Temple Reliefs and Images

Weighing of the Heart Ceremony

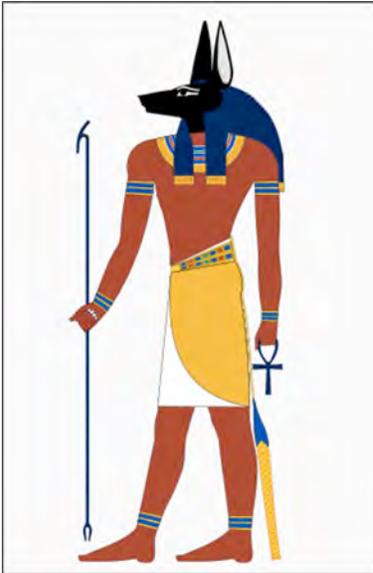
Upon the death of a pharaoh, priests carried the corpse to the temple. A “**Court of Truth**” was convened. Female Goddess, Ma'at, asked the pharaoh if he had been a kind and good king. Yes he was a good king, so Ma'at proceeded to remove the pharaoh's heart to weigh it on a balance scale against the weight of a bird's feather. If in this instance where the pharaoh's heart was heavier than the feather, the judge (Ma'at) declared that the pharaoh was not kind or good to his people and would be denied passage to the afterlife. That is, unless the pharaoh confessed his misdeeds (sins). Upon declaring his sins and making appropriate compensations, the pharaoh's heart was re-weighed and determined to be as “**light as a feather,**” The pharaoh's soul was thus prepared for his journey to the afterlife.



Weighing of the Heart Ceremony in the Temple

Ma'at was the ancient Egyptian Goddess of truth, balance, order, law, morality and justice. Ma'at was a Goddess and is represented by the ostrich feather. She regulated the stars, seasons and actions of both the deities and mortals, and she kept the order of the universe since creation.





Anubis is the name for the God of mummification and the afterlife in Egyptian religion. He was the pharaoh's embalmer and ushered the soul to the afterlife.

The “**Eye of Horus**” symbolized Horus's role in protecting the pharaoh and the Egyptian people and for providing them with good health. In addition, the “Eye” was needed for the soul's ability to see its way on the journey to the afterlife. It occurred to me that those beautifully exposed eyes on the pharaoh's coffins that I personally witnessed in Cairo might not have been merely artistic expression. I discovered one image of a pharaoh's mummy that had a glass paste ocular prosthetic in the socket. While it could have been that the pharaoh during his lifetime had lost an eye, it is also possible that the prosthetic was kept in place to help the pharaoh on his journey to his afterlife, as per Horus's instructions.



Tutankhamun, 1,400 BCE



Unknown mummy with ocular prosthesis



“Ay” Performing “Opening the Mouth” Ceremony on Tutankhamun
The ceremony insured that the Pharaoh’s soul could breathe and speak.



A solar boat was provided for the Pharaoh’s journey to the afterlife.
Sun God Ra and the Eye of Horus accompanied the Pharaoh.

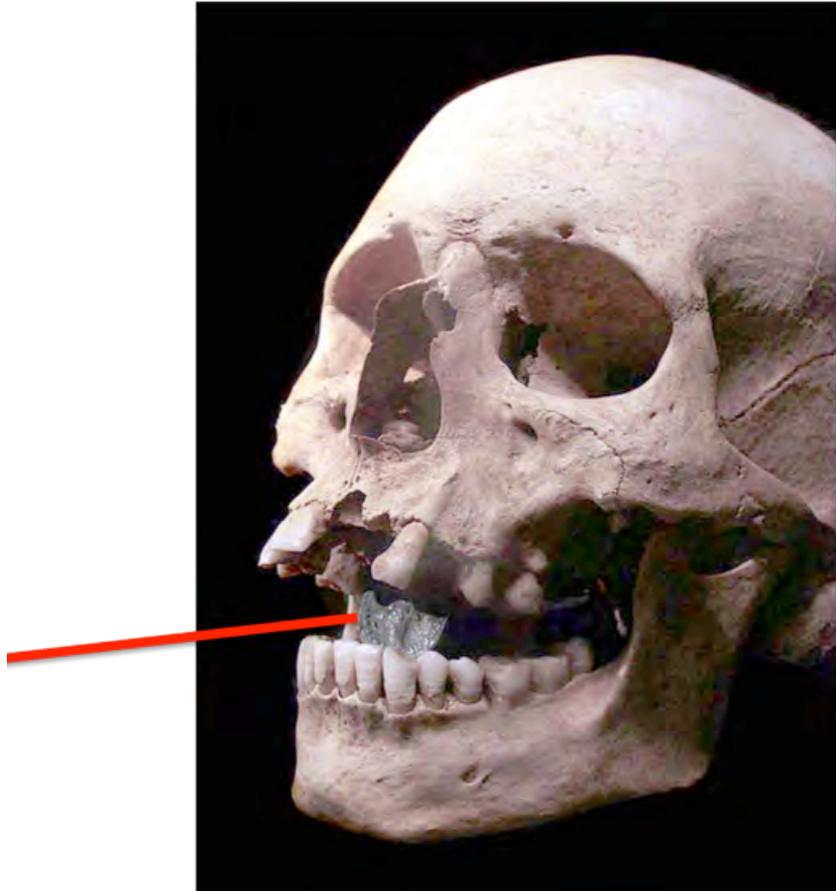
In another instance of funeral practices, I discovered the historical placement of coins over the deceased closed lids and extra coins placed in the mouth and on the mid-forehead.



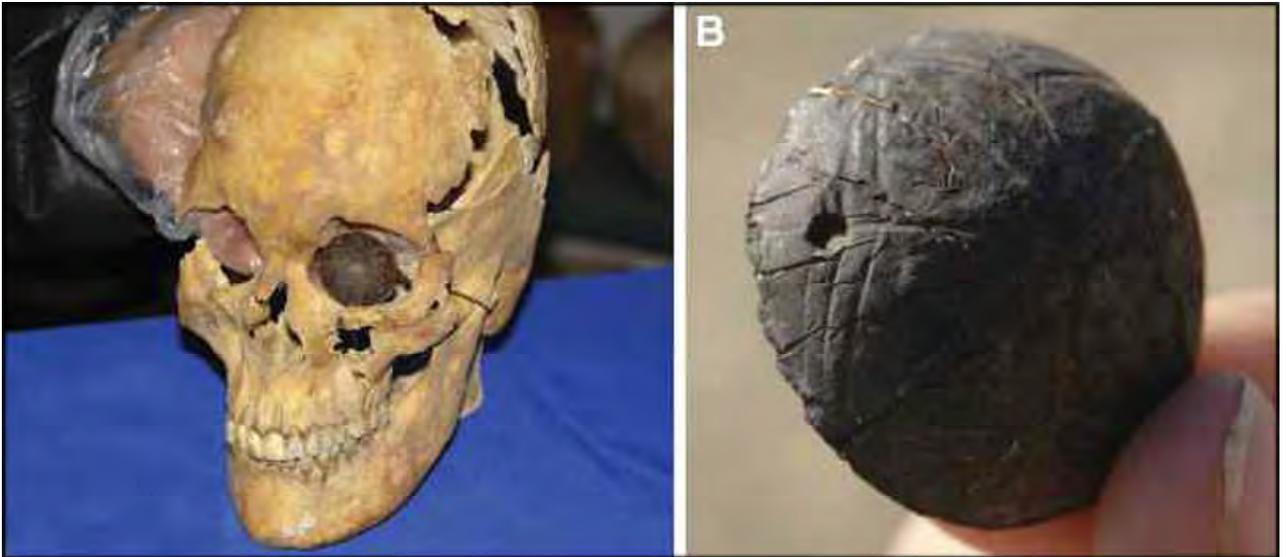
Coins for Charon's Obol - Ferry Ride to the Afterlife
The middle coin represents the 3rd eye (Veda-Hindu Chakra)



Ancient belief that the boatman, Charon, received Coins for ferrying the soul of the departed across the River Styx



Charon's Obol with added Coin in the Mouth



(L) Skull; Orbital Implant (Rt.) Discovered in a Persian Grave, circa 800 BCE

Chapter Six

Ancient Ayurvedic and Hindu Practices Pre-Egyptian Cultures

Robert S. Sherins, MD

Third Eye Chakra

Hindu customs are attentive to insightful awareness made possible by the presence of a 3rd eye. A corollary of the ancient spiritual interest in the 3rd eye is the more modern scientific view of the pineal body in the brain, in which anatomical and physiological evidence suggests that the pineal body has other functions as a sensing organ. The pineal body of the Tuatara lizard demonstrates remarkable anatomic structures of a human embryonic eye. Very recent scientific evidence also demonstrated that there are 6 types of specialized ganglion cells of the human retina that secrete a hormone, **melanopsin**. Melanopsin effects the circadian rhythms regulated by the Super-Chiasmatic Nucleus, which appears to have a number of other regulatory functions including: 24-hour circadian rhythms, innervation of the spinal cord and sympathetic system in the midbrain, and influence over secretion of FSH and LH sex hormones. Could it be that in evolutionary development, the pineal body served to regulate behavioral rhythms by its sensitivity to sunlight and temperature?



Symbols of the 3rd Eye Chakra, Ayurveda – Hindu

Historical Ayurveda Culture

Robert S. Sherins, MD

Ayurveda is a holistic medical system whose knowledge and culture was transferred to Middle Eastern cultures through correspondence, visitation and commercial exchanges. Many of its tenets were in existence prior to the invention of written Sanskrit, the tenets advocated the earliest sacred scriptures of India. Each of us was supposed to understand that we were one with existence and we inherited a divine soul, which was universal. Vedanta was a word that is a combination of "Veda: (knowledge) and "anta" (the goal of). The knowledge of ourselves was equivalent to our knowledge of God through self-realization. God was personal. Among the code of belief was a concept that God appeared at the instance of the formation of our universe, which in modern times has been explained by the Albert Einstein's cosmic concepts of the "Big Bang," origin of our universe from the instant of cosmic formation, so aptly written in the biblical phrases, "In the beginning was the Word...and Let there be light..." Vedanta concepts about our cosmic origin were thousands of years ago, long before the technology of modern sciences. I found most amazing that the Vedanta concepts were discovered through self-realization, without the scientific tools. Vedanta philosophy incorporated the belief of the eternal God who never dies. Human life was recognition of the manifestation of our eternal divinity. Vedanta also declared that the knowledge of God was observed by all human religions¹⁸ In researching the spiritual concepts of the Egyptians, inscribed so well in the Egyptian **Book of the Dead**, it was recognizable that many of our modern spiritual practices were based upon former ancient spiritual customs. Egyptian spiritual and cultural practices were based upon even earlier pre-classical Egyptian customs of the Nubians.¹⁹ The first series of Egyptian Pharaohs were Nubians, not Egyptian monarchs.

By the time of the reign of Pharaoh Akhenaten (ruled 1352-1336 BCE), there had been well establish cultural and trade relationships between India and the Middle Eastern states. Among the several regional kingdoms of the Hittites, Mitanni and Assyrians located in the northern regions of Syria, Assyria, Turkey and Iraq, was the use of vocabulary found only in India among the Vedanta and Hindus. The Vedanta conceived of universal monotheism, although in practice the Hindus also worshiped many other lesser Gods. Their one God was the Supreme God.

¹⁸ Radhakrishnan, Sarvelpalli, Charles A. Moore: A Sourcebook in Indian Philosophy, Frecks fiction and more, 22nd printing.

¹⁹ Sudanese, People of Cush.

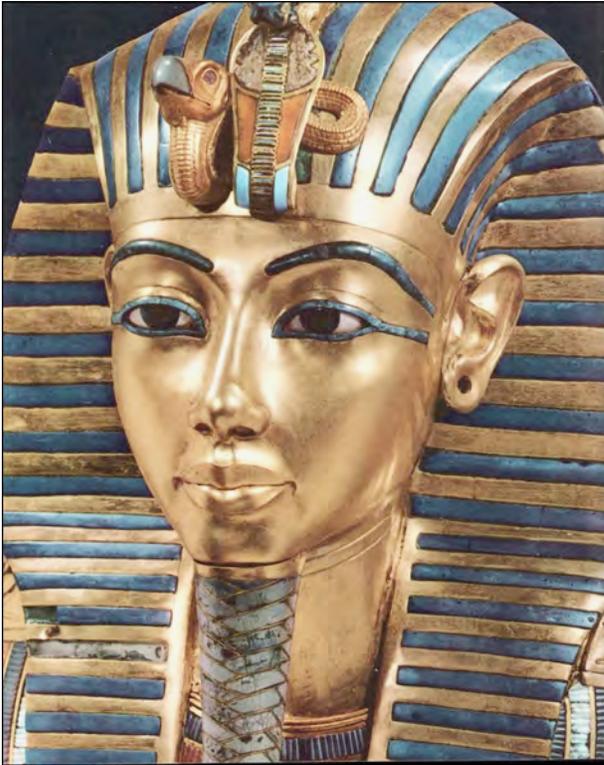
Akhenaten²⁰ attempted to change the polytheistic religious culture of the Egyptian priests, but he was thwarted by the intensive clerical pushback. Apparently, the Egyptian Sun-King, Akhenaten, was the son-in-law of the Mitanni king, Tushratta, also spelled Tuišata in the Hittite nomenclature. Many other words have been discovered written in letters of correspondence between Egypt, Mitanni and India. Akhenaten's beliefs were revolutionary and appear to be a basis for the later beginnings on monotheism in Western culture. Akhenaten's first queen, **Nefertiti**, was a Mitanni and her royal presence in Egypt may explain much of the evidence of the shared cultures. Many biblical scholars believe that the monotheistic views of Akhenaten became a model for later Jewish, Christian and Islamic spiritual principles. A famous Egyptian hymn to Aten by Akhenaten is seen as a precursor of Psalm 104. It is believed that other Vedic hymns were also part of Mitanni culture.



Pharaoh Akhenaten (Amenhotep IV) Worshipping the Aten (Sun God)²¹

²⁰ Also, Akhenaton, Aten, Amun or Ameophis and Amenhotep IV.

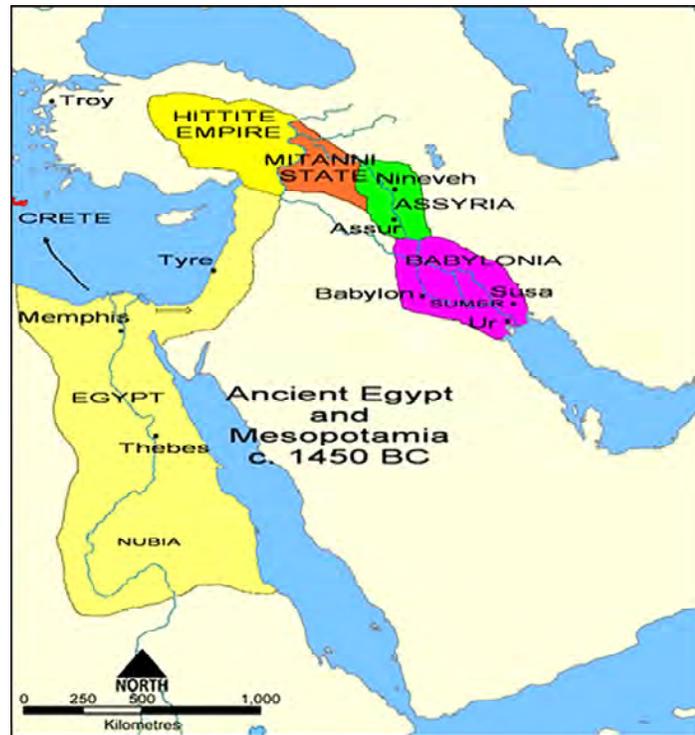
²¹ www.wikipedia.com



Queen Nefertiti²²



Pharaoh Akhenaten²³
[Amenhotep IV]

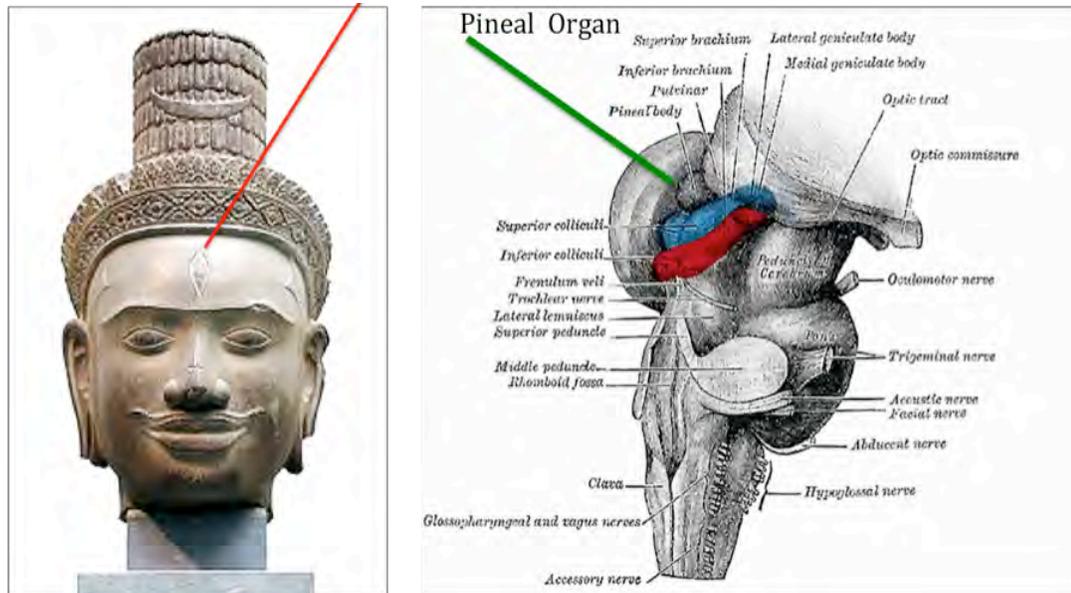


Map Mesopotamia, 15th C. BC (Mitanni State in Orange)

²² Ibid.

²³ Ibid.

It is beyond the scope of this manuscript to summarize the numerous and varied cultural, spiritual and intermarriages among the monarchs of the region. However, the examples offer firm evidence of their sharing of both cultural and spiritual vocabularies and concepts.²⁴



Left: Cambodian 3rd Eye

Right: Anatomical Graphic of Human Pineal Body

Neurological Considerations of the Pineal Body

There are several proposed scientific theories based upon histological research of the tuatara lizard brain, as well as recent theories about evidence of a role of chemical secretions of the retina, such as melatonin, by specialized retinal ganglion cells. This information adds to the overall confusion about the potential roles of the pineal body and if there is a relationship to the ancient Vedanta (Hindu) theories about the 3rd eye (chakra).

During the 1930s, Harvard University researchers enucleated the eyes of a flock of duck chicks. Glass rods were inserted into the orbits to connect with the stumps of the optic nerves. They placed the ducks on the floor of the university planetarium to observe behavioral activities during controlled experiments involving changes in the amount of daylight that stimulated changes in the circadian rhythms. The ducks began to migrate along the floor of the

²⁴ Kak, Subhash: **Akhenaten, Surya and the Rgveda**, 2003 - www.ece.lsu.edu/kak/akhena.pdf

planetarium based upon the programmed seasonal daylight variations. The ducks also molted their feathers appropriately.

In the past decade, researchers have discovered several types (6 types) of mammalian intrinsically specialized photosensitive retinal ganglion cells that secrete the photosensitive molecule, **melanopsin**, which influences mammalian circadian rhythms.²⁵ It is suspected that these chemicals also influence the development of the retina of the visual system, the papillary light reflex, sleep, cognition, mood and light aversion.

Melanopsin affects several nuclei of the central nervous system, including the **suprachiasmatic nucleus** in the region of the hypothalamus. This neurologic center affects circadian rhythms. The mammalian eye therefore expresses both a visual imaging system, as well as a non-imaging endocrine type function.²⁶

To further add to the complexity of these findings, a histological study of the **tuatara** turtle was initiated.²⁷ Discovered was the vestigial pineal body that although not completely differentiated, was comparable to the structural anatomy of the mammalian eye. What does the eye-like structure implicate in evolutionary terms? I do not believe there have been any fossil records demonstrating a 3-eyed vertebrate or the less likely mammalian equivalent. As well, ancient non-bony body parts would not have been preserved.

The non-visual receptors of the deep brain, pineal organs and the retina have been studied with particular interest in humans in connection with sleep disturbances, seasonal depression and jet lag among travelers.²⁸ The term, **non-visual photoreceptors**, applies. These are called **photo-neuronal receptors**. Additionally, the non-visual light-perception had other functionality, such as in thermoregulation in invertebrates and in aquatic animals seeking environmental suitable illumination. The authors supposed that the non-visual photoreception preceded the visual functions of vertebrates.²⁹

²⁵ Q. Cui, C. Ren, P.J. Sollars, G.E. Pickard, K.F. So: **The injury resistant ability of melanopsin-expressing intrinsically photosensitive retinal ganglion cell**, *Neuroscience*, Volume 284, 845-853, 22 Jan 2015.

²⁶ Ibid.

²⁷ Ung, Cy, Molteno AC: **An Enigmatic Eye: The Histology of the Tuatara (turtle) Pineal Complex**, *Clin Experiment Ophthalmol*: 2004 Dec; 32 (6); 614-618.

²⁸ Vigh, B.; Manzano, MJ; Zadori, A.; Frank CI; Lukats, A; Rohlich, P; Szel, A.; and David, C: **Nonvisula Photoreceptors of the Deep Brain, Pineal Organs and Retina**, *Histol Histopathol*, 2002 Apr; 17 (2), 555-590.

²⁹ Ibid.

From - "Tuatara – The Lizard that Isn't"³⁰ [FactZool.com]

<http://www.factzoo.com/reptiles/tuatara-lizard-that-isnt-lizard.html>



"Tuataras are relics of a bygone age now found only in isolated parts of New Zealand. Males grow up to 24in (61cm) from snout to tip of tail and weigh 2.2lb (1kg) while females grow up to 18in (45cm) and weigh 1.1lb (0.5 kg). Their name comes from a Maori word meaning "peaks on the back," a reference to the triangular folds of skin that form a conspicuous crest along the back and tail of the male, and a

rudimentary crest on the female. The crest is normally soft and pliant, but can be raised and stiffened in a threat display by the male when alarmed. Females are very timid, retreating hastily when disturbed.

*Among their many curious features these reptiles possess, are a third "eye" in the top of the head, eggs that take 15 months to hatch and a lifespan in excess of a century. **It is the sole surviving member of an entire reptilian order, the Rhynchocephalia, which came into being in the Mesozoic (220 million years ago), before the first dinosaurs appeared.** Rhynchocephalians lived in Europe, Asia, North and South America, and southern and East Africa, but all except the tuatara were extinct by the end of the Mesozoic (65 million years ago). It is almost identical in structure to a form that existed about 140 million years ago, which makes it of exceptional interest to scientists, who study it for clues to the physiology and anatomy of reptiles that lived over 200 million years ago.*

Although it superficially resembles a lizard, the tuatara has a number of features which clearly distinguish it: the structure of the skull, which has two pairs of arches like a crocodilian's; the vertebrae, which are hollow at each end; a small projection on the back of each rib (the uncinat process); a bony skeleton in the abdominal wall; the jaw teeth, which are not separate structures but serrations of the jaw bone; the absence of an ear drum (tympanum) and of a middle ear, and the absence of a male copulatory organ. Some features of the tuatara's brain and of its locomotion resemble conditions in amphibians, and its heart is more primitive than that found in any other reptile group.

³⁰ <http://www.factzoo.com/reptiles/tuatara-lizard-that-isnt-lizard.html>

Some of the tuatara's specialized features appear to be associated with a change habitat since the days of its early ancestors. This reptile is now a nocturnal burrower with specializations of the visual cells, including a "duplex retina" containing two types of visual cell, which presumably enable the animal, like crocodiles and turtles, to see by night as well as by day. The retina is backed by a tapetum lucidum, a layer: which reflects light back through the sense cells a second time. Tuataras have a low metabolic rate, a capacity for low temperature activity and long, slow growth. Like a lizard's, the pineal body in the tuatara's brain is connected to a "third eye" on the top of the head: the narial a structure found below the skin in a space between the parietal bones in the roof of the skull. The parietal has many of the structural features of an eye, including a lens, retina and nervous connections to the brain, but experimental work has shown that, although sensitive to light, it cannot contribute to the formation of visual images. The pineal body in the tuatara is not known to be sensitive to light, but it also has a structure, which would permit light sensitivity.

The islands where the tuatara survives today are all wholly or partially cliff-bound, with boulder beaches, and the seas surrounding them can change rapidly. Landing on the islands is difficult, helping to protect them from interference by man. On islands that are more readily accessible, the tuatara has been eliminated through disturbance of habitat and introduction of predators. Large populations of burrowing seabirds (for example, petrels, prions, and shearwaters) come ashore each year to nest. By their burrowing they provide shelter for the tuataras (although they can dig their own burrows) and by defecation and shuffling movements on the forest floor they encourage a high concentration of ground insects, especially beetles, which provide a large part of the tuatara's diet. The diet also includes spiders, earthworms, slaters, slugs, snails, geckos and skinks and the chicks and eggs of seabirds. Adults occasionally eat young tuataras.

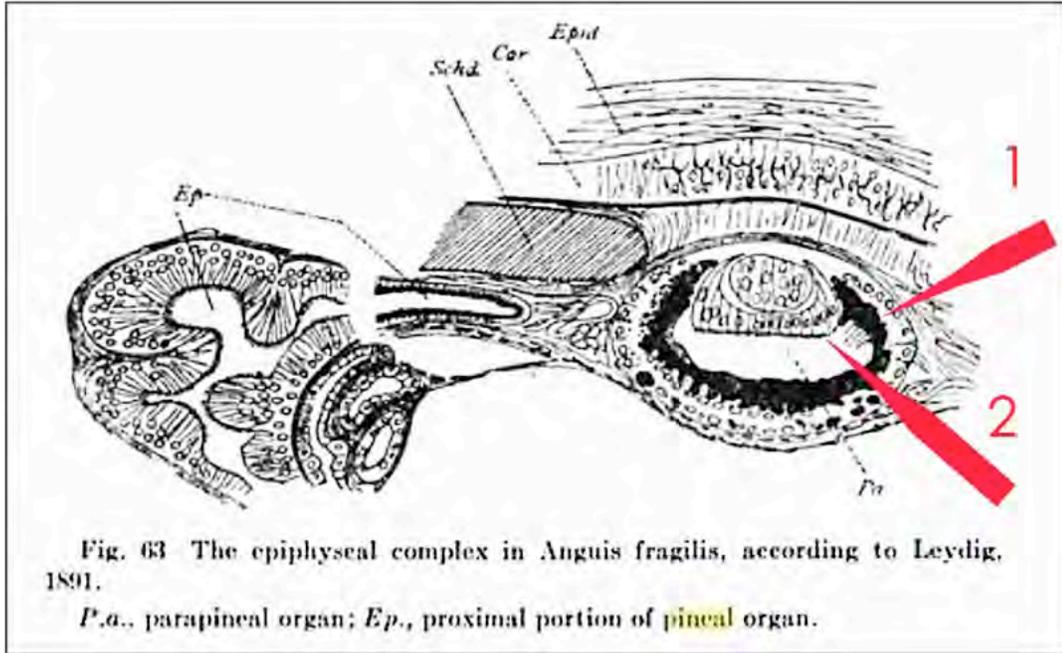
Apart from coming out of their burrows on sunny days to bask in or near their burrow entrances, tuataras are active at night. They mate in January (Southern Hemisphere summer), and in October or November (spring) the females excavate burrows 4in (10cm) deep or more, in which they lay 6–15 eggs. The eggs are bluntly oval, about 1–1.2in (25–30mm) long, and enclosed in a parchment-like covering. The incubation period is

approximately 15 months – the longest known for any reptile. During incubation the eggs are vulnerable to predators, and to damage from extreme changes in climatic conditions. The embryo develops a horny, bluntly thorn-shaped egg-breaker on the top of its nose. With this it slits the soft shell before emerging. The hatchlings are about 2.2in (54mm) long from snout to vent, and are very active – a necessary feature for survival, as they are almost immediately dependent on their own efforts to find food. They may dig small burrows for themselves, or hide under stones or logs. The egg-breaker disappears about two weeks after hatching. Growth is long and slow; tuataras reach sexual maturity at about 20 years of age, and growth continues until 50–60 years of age. It is likely that they may live for over 120 years; but this has yet to be proven, and views that tuataras live to be 200–300 years of age are sheer speculation.

*Their survival in New Zealand, while its relatives became extinct in all other parts of the world, is probably due to the fact that New Zealand became separated from other land masses about 80 million years ago, before any of the later evolving land predators reached it. Apart from man, their main enemy may now be the kiore, or Polynesian rat (*Rattus exulans*); the best self-maintaining populations occur on rat-free islands. The tuatara is absolutely protected by the New Zealand Wildlife Act – protection essential for its survival.”*

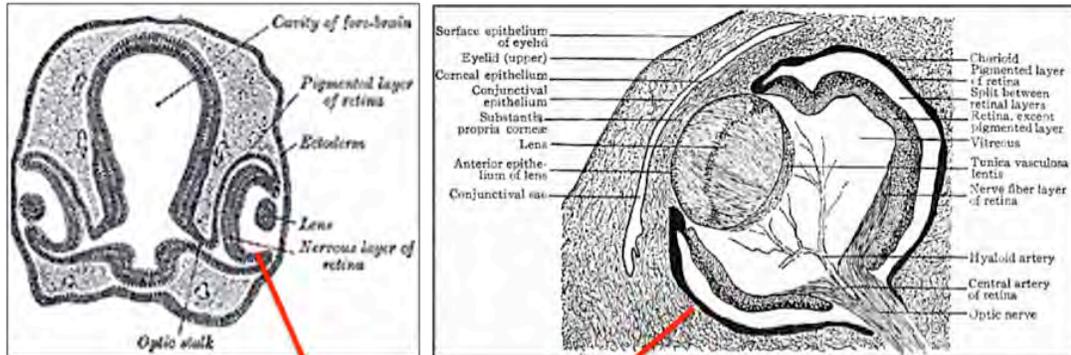
There is accumulating evidence that total blindness in people results in significant disorders of the circadian rhythms.³¹ Almost all totally blind people suffer from this disorder. The conclusion drawn from these observations is that vision is required for synchronization of the circadian biorhythms. Such afflicted individuals have great difficulty sleeping at night and staying awake during the daytime.

³¹ Sack, RL; Lewy, AJ; Blood, ML; Keith LD; and Nakagawa, H.: **Circadian Rhythm Abnormalities in Totally Blind People; Incidence and Clinical Significance**, J Clin Endocrinol Metab, 1992, Jul, 75 (1), 127-134.



Histology of the Tuatara Lizard's Pineal Organ

1. Outer layer of the optic cup becomes the eye wall and retina.
2. Inner structures become the lens



Histology of Early Human Embryonic Optic Cup

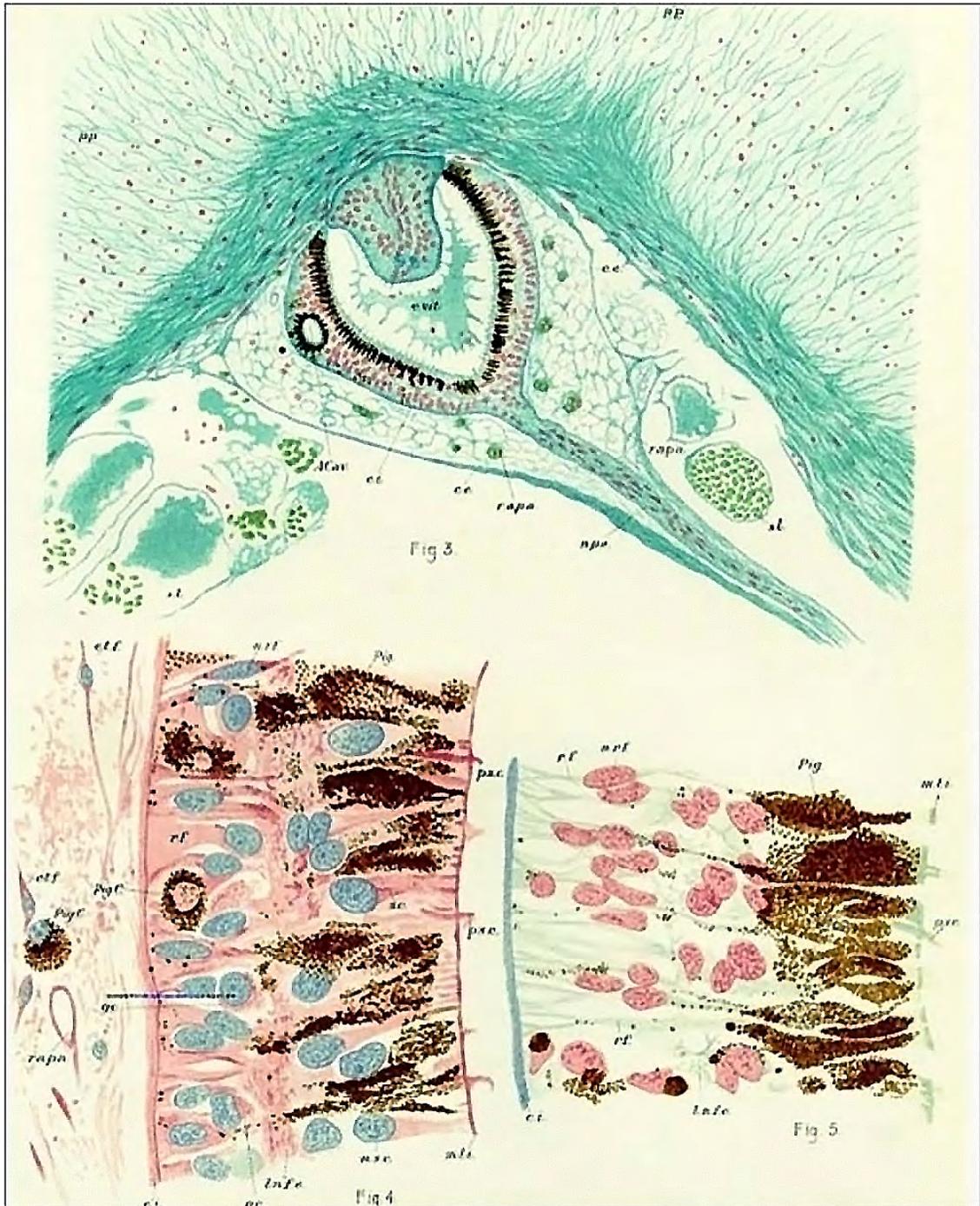
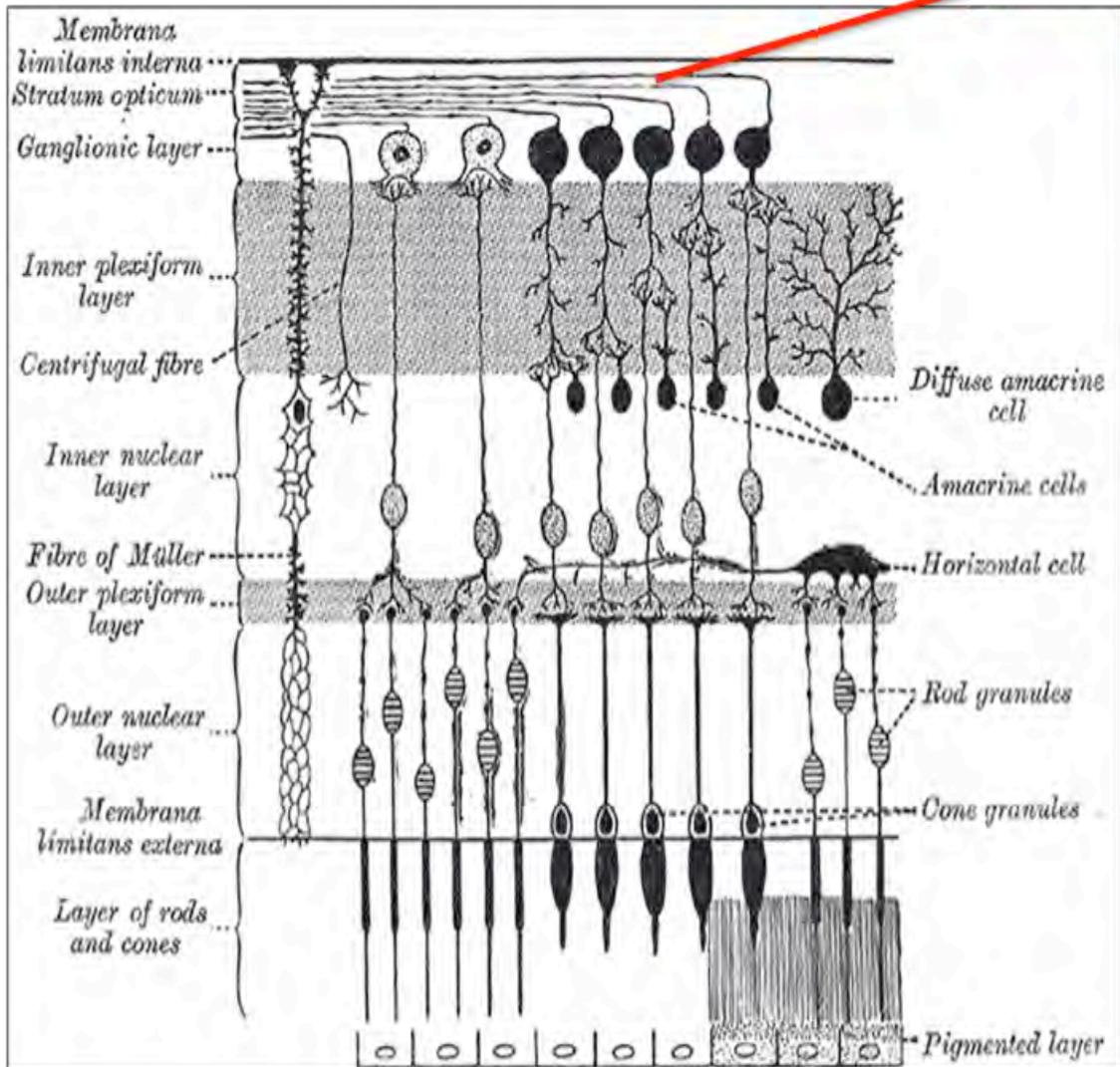


PLATE 20.

- Fig. 3.—Sagittal section of the pineal eye and nerve, capsule of the eye, parietal plug, etc. Stained with borax carmine and picro-indigo-carmin. (Sphenodon V.)
- Fig. 4.—Section of the retina of the pineal eye. Stained with Ehrlich's hematoxylin and eosin. (Sphenodon I.)
- Fig. 5.—Section of the retina of the pineal eye. Stained with borax carmine and picro-indigo-carmin. (Sphenodon V.)

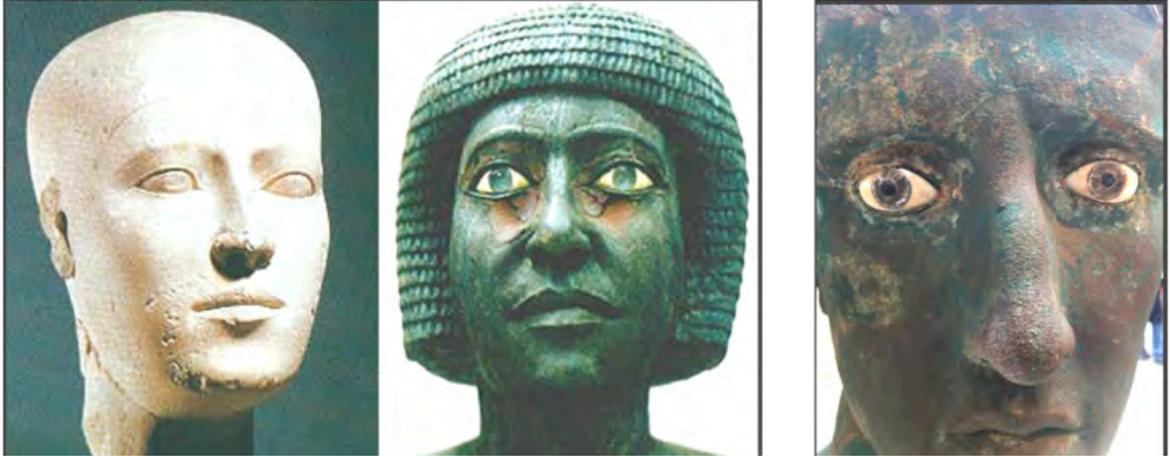
The parietal eye of the tuatara (Plate 20 from Dendy, 1911).



Melanopsin is secreted by specialized ganglion cells of the retina

Gallery

Ancient Glass Paste Ocular Devices in Statuary



Statues of Egyptian Pharaohs with cosmetic glass paste eyes
Left & Center: Ancient Egyptian statues, circa 2,500 BCE
Right: Bust of Caesar Augustus in Nubia



Examples of ancient Egyptian glass eyes



Turkish (Ottoman) Marital Gift to Reflect the Evil and
Protect the Married Couple from Harm



U.S. Currency, One-Dollar Bill, Backside
Symbol - Triangular Eye: Masonic, Trinity, Protection & Prosperity

“Keyn Eyin Hore”³²

Robert S. Sherins, MD

Almost 4,000 years ago, early Hebrews since the times of Abraham, Joseph and Moses were just as subject to superstitions as non-Jewish populations. There were several ways to express concerns about protecting one’s family from the devastating affects of a harmful glance from a stranger or becoming concerned about provoking harm from a potentially evil incident. As well, overly complementary comments were perceived to have unintended negative side effects. The recipient might fear retribution in the form of a harmful consequence. Numerous types of amulets were worn as protection to ward off the bad consequences of an evil eye, glance or comment.

There were ancient beliefs that the glance of an eye had the power to alter one’s circumstances in a negative or destructive manner. A person’s reaction to the stare of the human eye was to perceive the gaze as an extreme look from the “Eye of God.”³³ Amulets were worn to ward off bad effects from someone’s “stare” or from excessive praise. The Yiddish expression developed, “**Keyn Eyin Hore,**” that translates, “Without An Evil Eye.” Transliterations of this expression include, “Kenyan Hore” and “Yen Ha-rag” (“the eye of evil”).



Kabala Amulets

³² Ulmer, Rivka, “The Evil Eye in the Bible and in Rabbinic Literature,” KTAV Publishing House, Inc., Hoboken, New Jersey, 1974.

³³ Ibid.



Kabalah Evil Eye Amulets



Turkish Evil Eye Amulet



Commercial Turkish Evil Eye Amulets
Cairo Museum

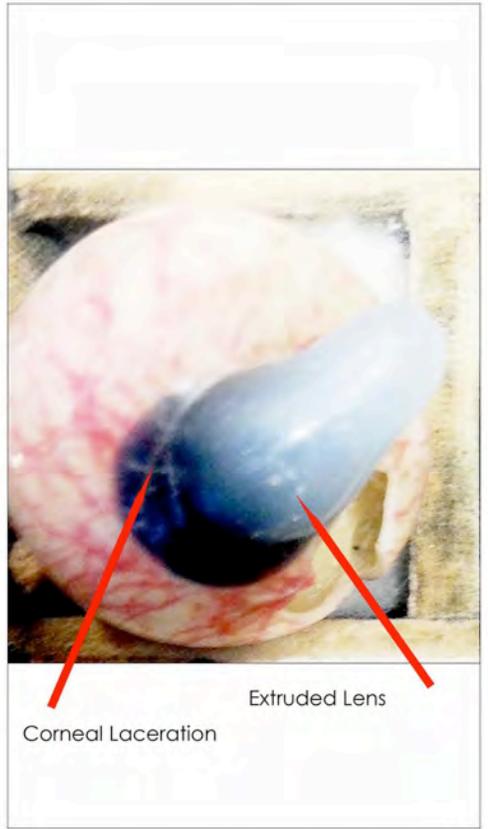
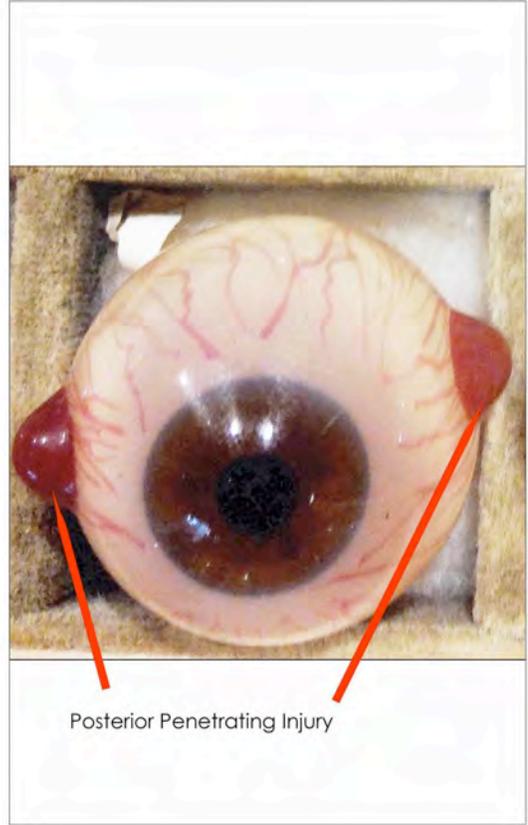
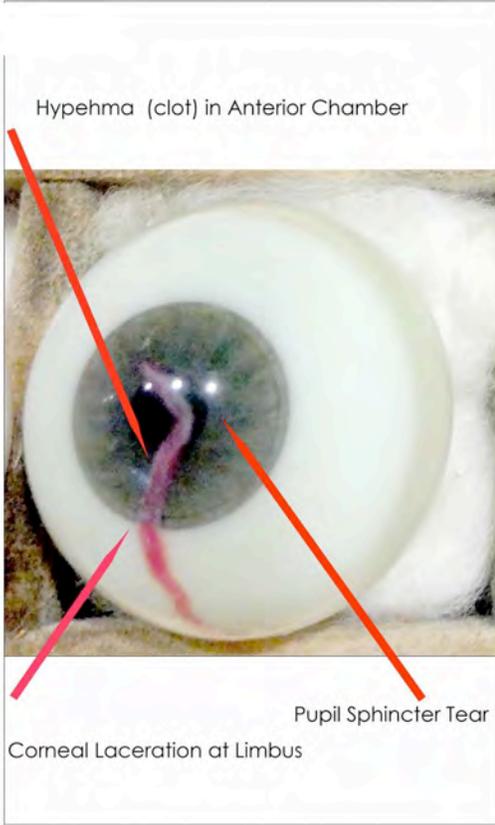
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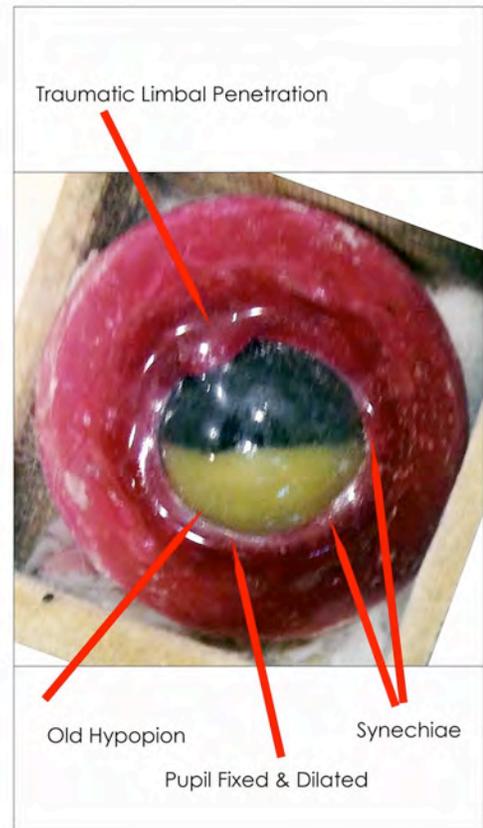
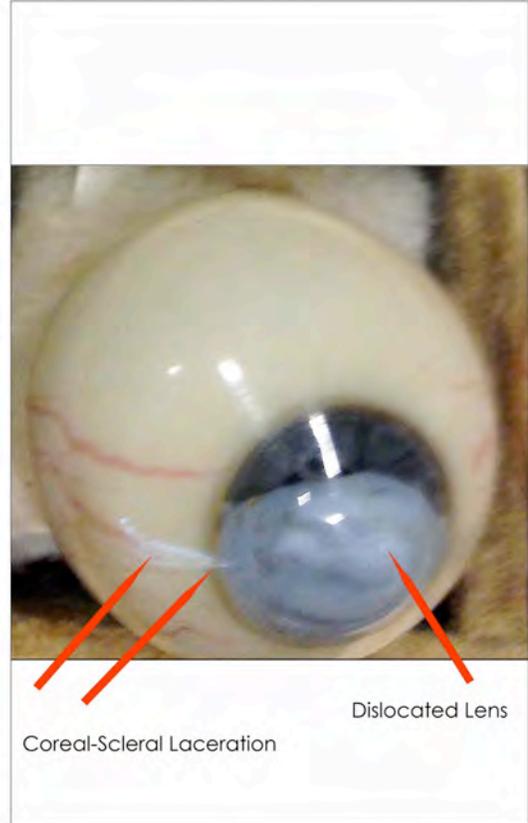
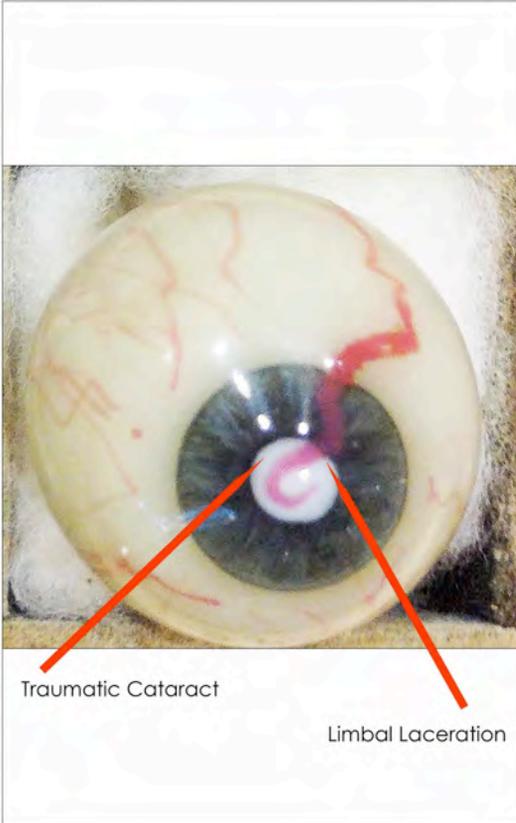
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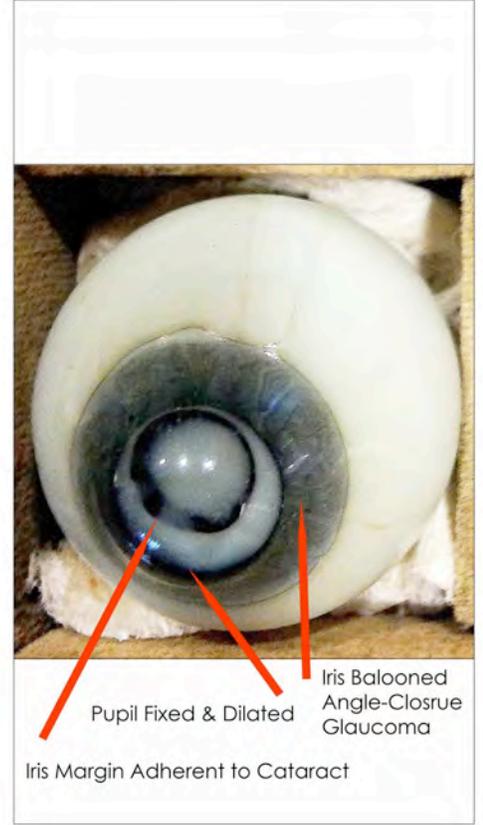
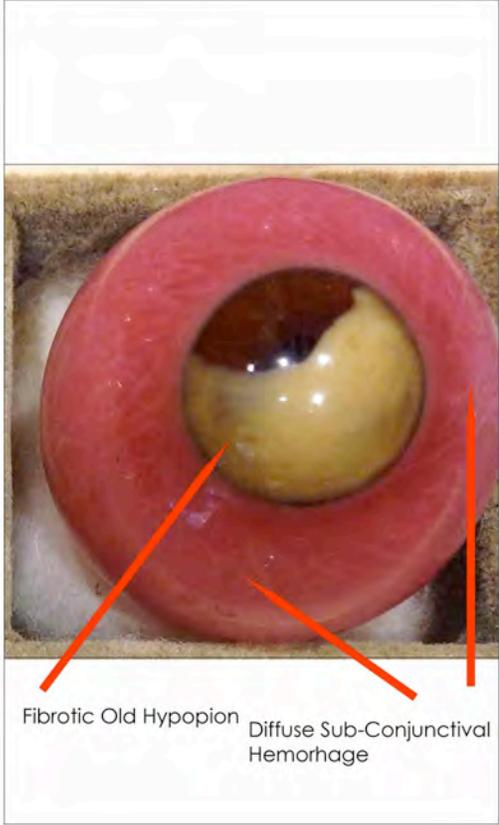
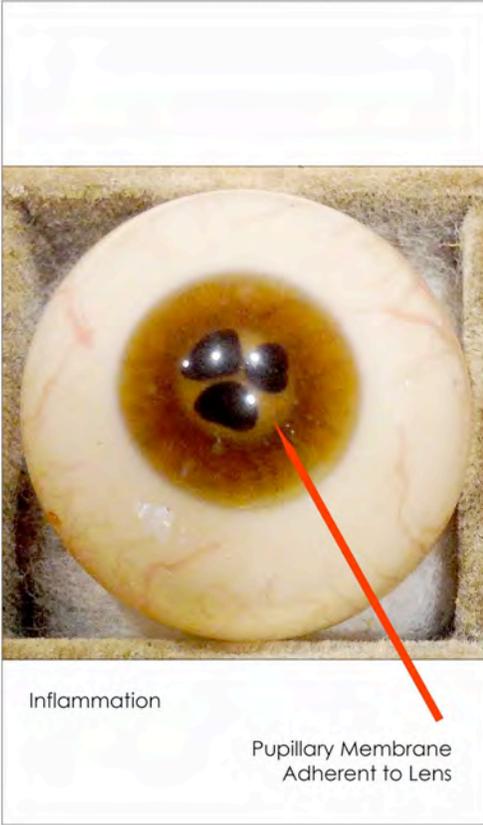
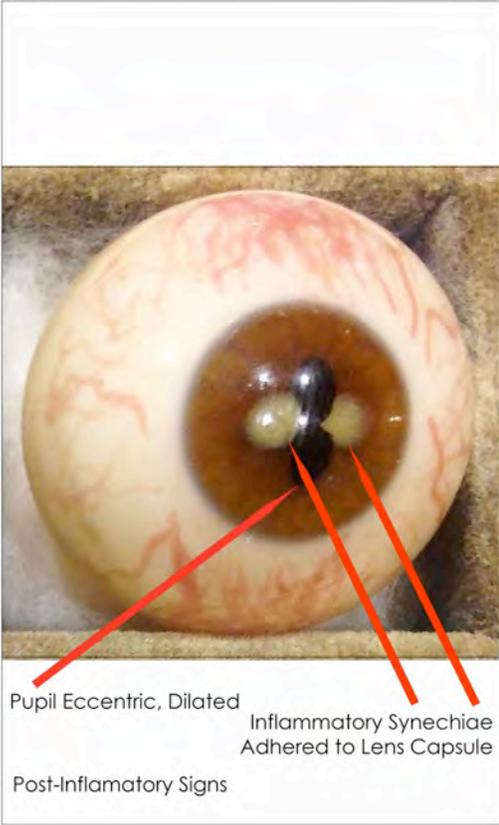
Ocular Pathology Kit³⁴
Blown Glass Specimens (Augenkunst)
Danz Ocularists, Lauscha, Germany, circa 1880

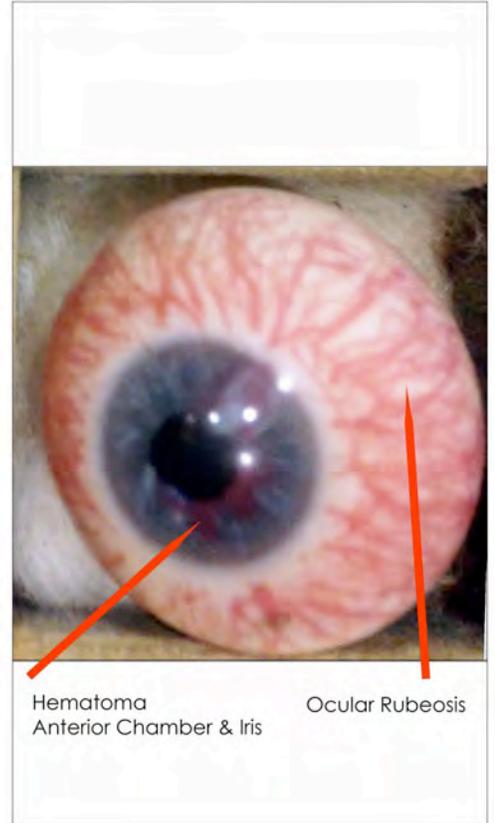
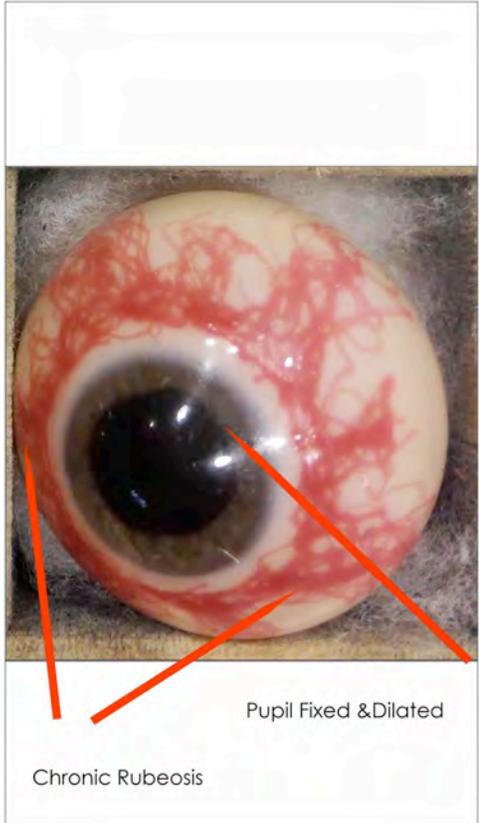
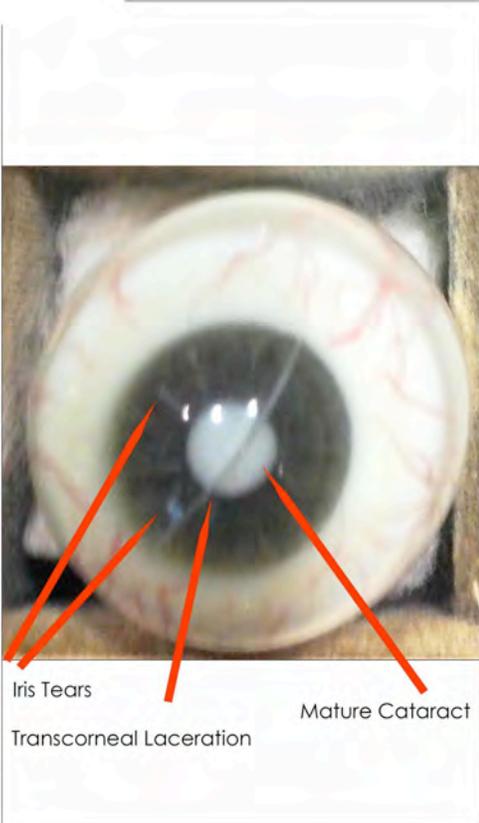
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Kalmanovitz Library
Knowledge Center, Special Collections

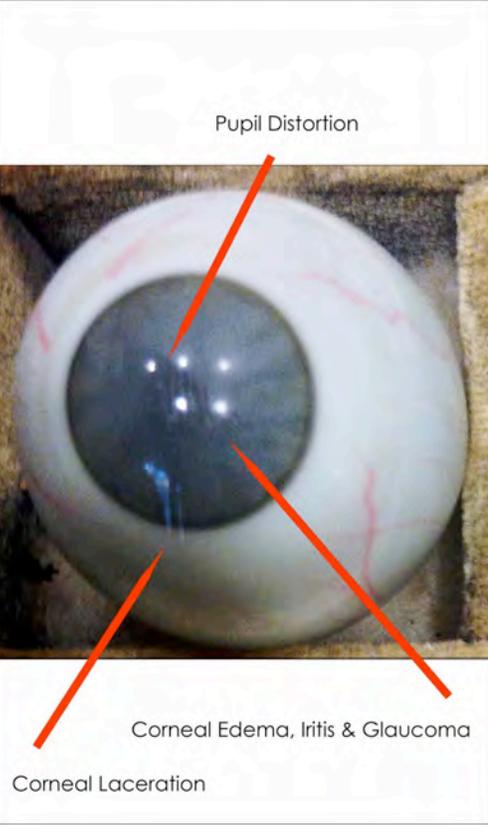
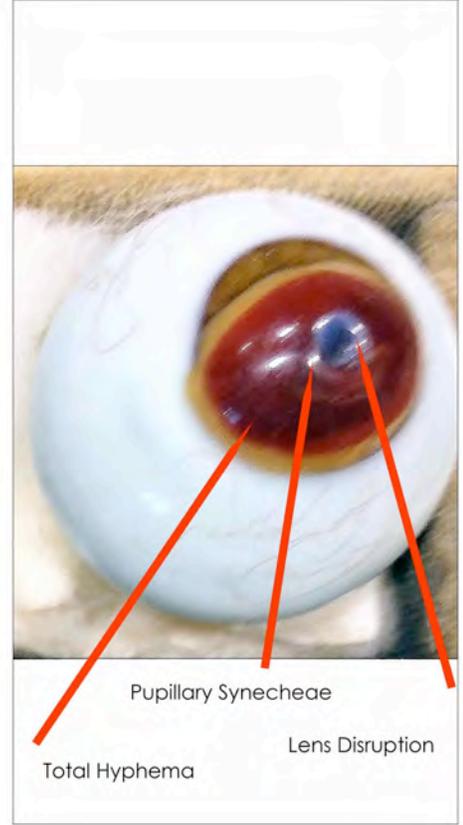
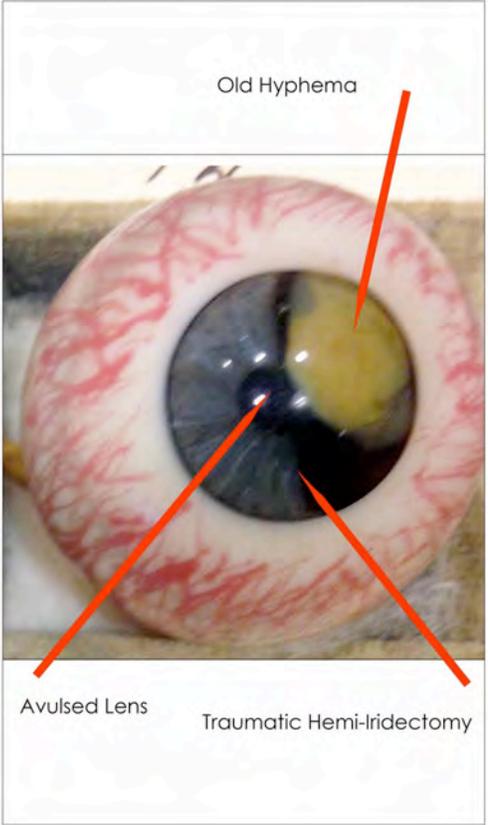
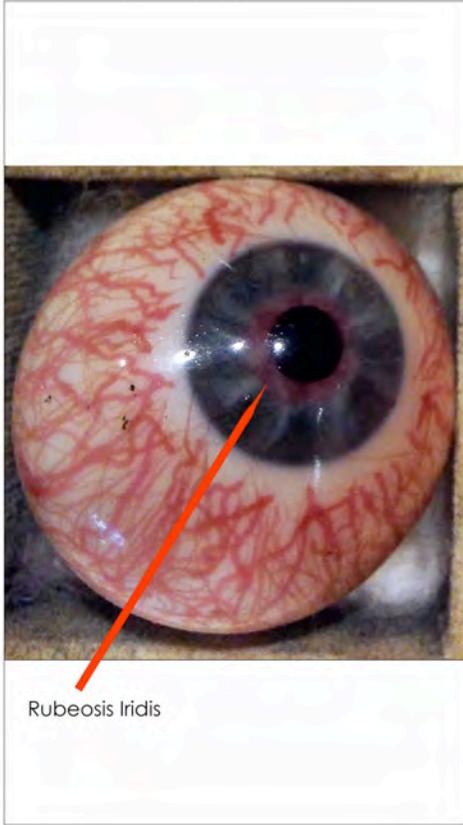
³⁴ Gifted to UCSF Special Collections and Archives by Phillip Danz, 1963.

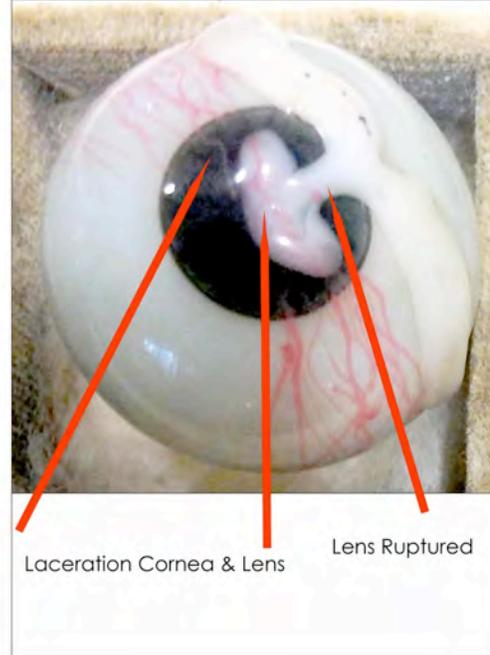
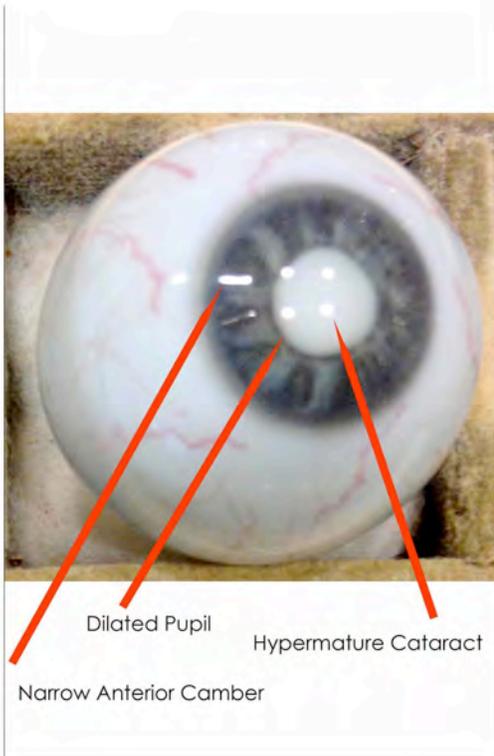
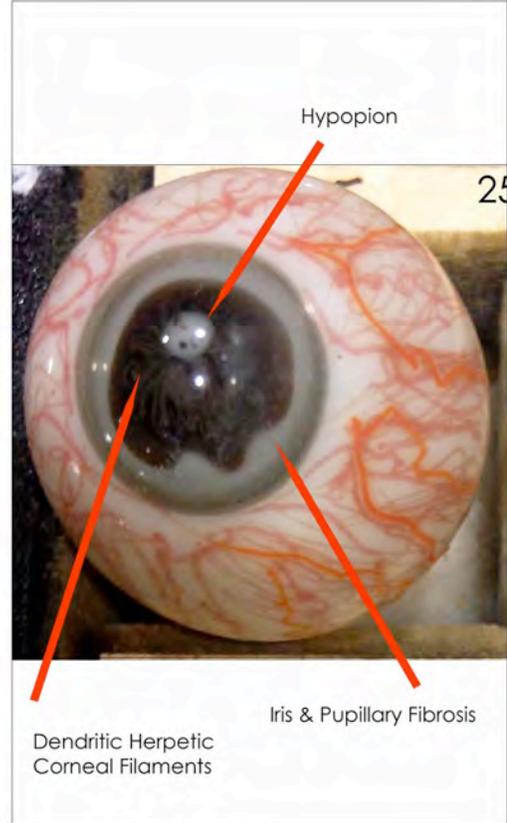














Case presented with surgically eviscerated injured eye.
No conformer had been used to preserve the fornices.



Placement of conformer.



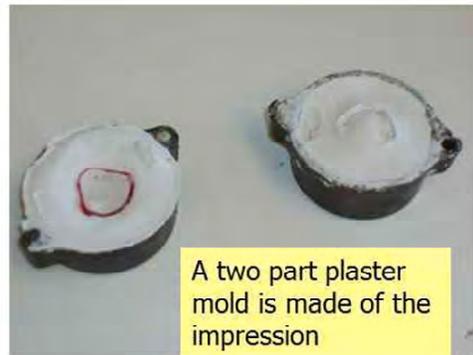
A thin acrylic conformer is insert over the recessed eviscerated globe
to determine the fornices for the ocular prosthesis.



An alginate impression is taken of the socket.



The impression is backed up with dental wax



A two part plaster mold is made of the impression



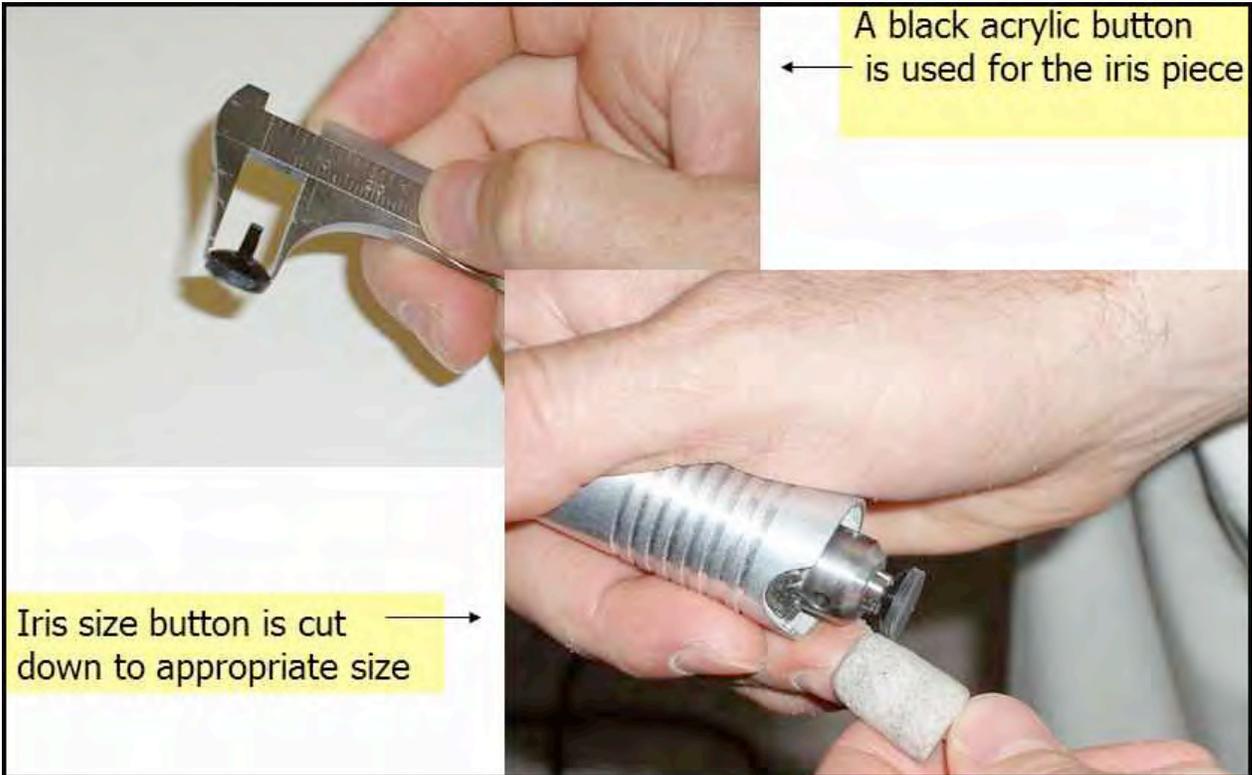
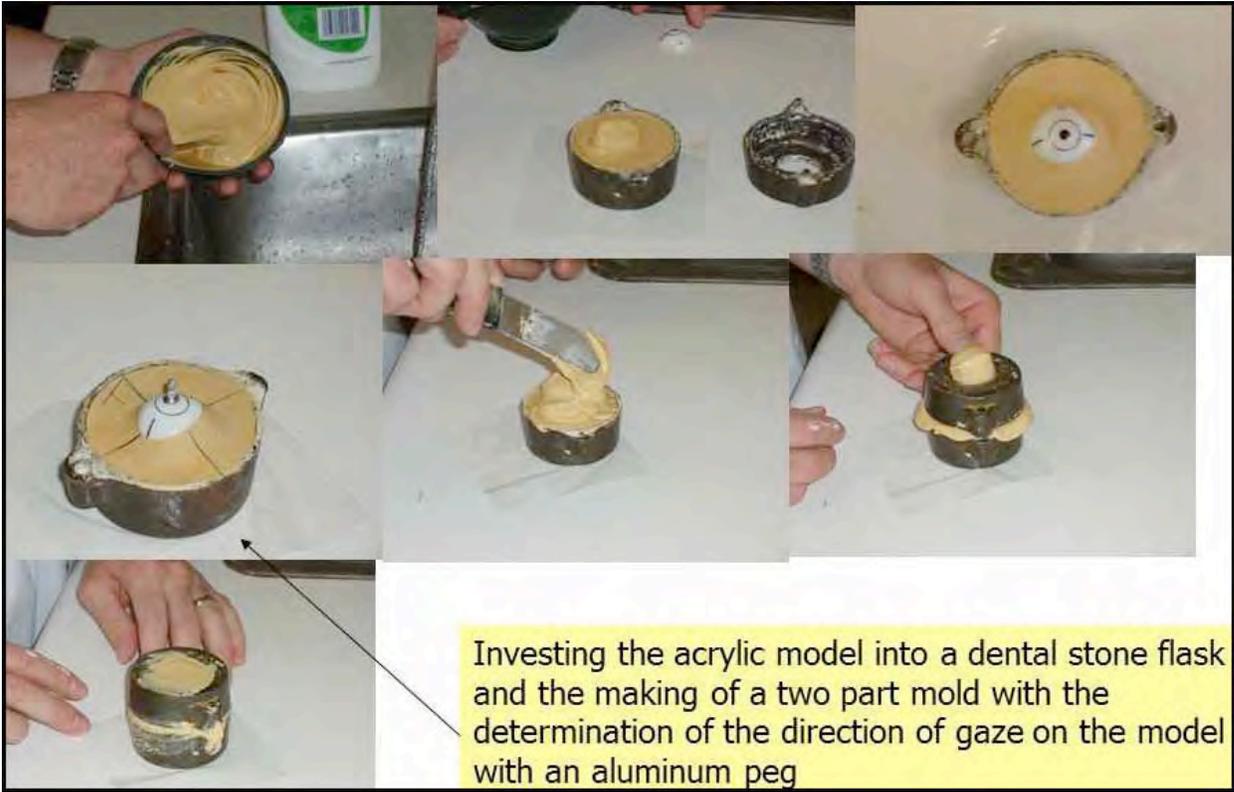
Plastic is placed under pressure



and heat-cured in under pressure

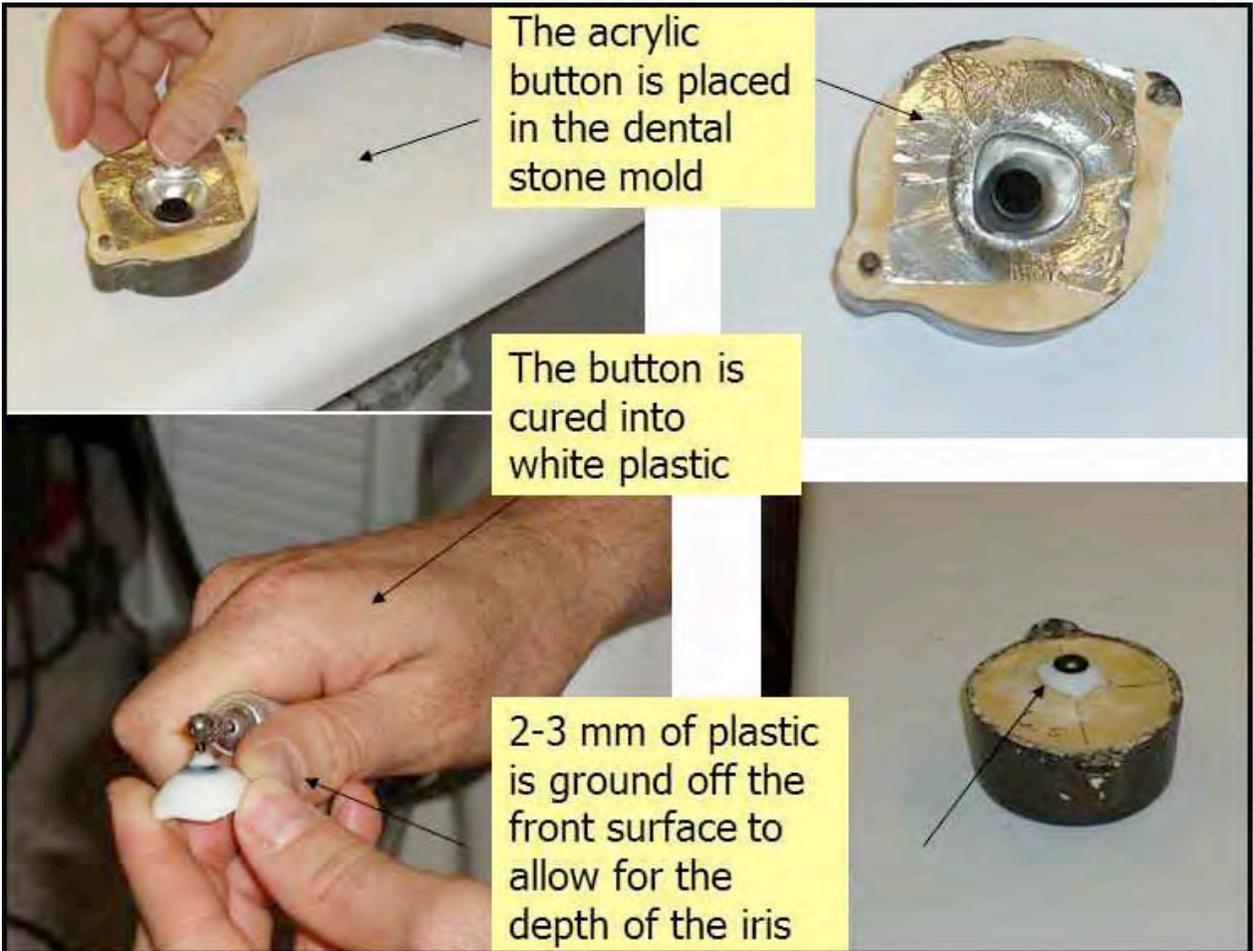


The plastic white model is polished and placed in the patient's socket





Marking orientation of the prosthetic





Painting final Iris Details



Comparing final prosthetic details to patients opposite eye



Inserting final ocular prosthetic



Ocular prosthetic fabrication and fitting completed

Chapter Nine

Glass Eye Fabrication

Biography & Images

William A. Danz, Ocularist
San Francisco, California

Growing up as a 5th Generation Ocularist

William A. Danz, BCO, San Francisco, CA



One of my earliest recollections of what my father, Gottlieb Theodore Danz, II, did as a profession was when I was 8 or 9 years old. Our father asked my fraternal twin brother, Walter, and I if we wanted to work at a summer job at the 240 Stockton Street office in San Francisco to do lab work. We were given the tasks of polishing clear acrylic postoperative drainage conformers. It involved polishing the conformers on a wet spinning cotton wheel with a wet, fine dental pumice. A large wheel on a dental lathe was used for the anterior surface and edges and a smaller dental lathe was used for the posterior surface. The final polish involved a dry cotton wheel. It was my first introduction to the ocular prosthetic lab. My fingernails were never so shiny or so smooth. My father said if we wanted to continue our allowance,

we would need to work for it. I am sure he was most likely trying to get us interested in the profession to carry on the family lineage.³⁵

Years later, after we moved to Marin County in 1960, I had a case of glass eye conjunctivitis. It was in the 5th grade that I decided to do a classroom "show and tell" assignment and presented to the class a glass eye my father had made. It was handled by many of my fellow students. Being somewhat of a class clown, I placed the glass eye over my own eye exterior to the eyelids and wore the glass eye as one would wear a monocle. A few days later, I developed conjunctivitis in that eye due to the contamination of the glass eye. A lesson learned to this day.

The decision to become an ocularist occurred many years later as I was attending San Francisco State during my junior year in 1970. I had chosen to pursue a business career in the up and coming computer industry. While living on campus in San Francisco, I wanted a part time job to supplement my allowance. My father had sold the business in 1968 to my two older brothers, Ted and Phil and they offered me a job. I began working for G. Danz & Sons in January 1970. My first assignment was polishing clear acrylic postoperative drainage conformers. We also had a catalog of various conformers, implants, retinal detachment items, and other products related to ocular prosthetics. I became very involved in the management of the catalog.

³⁵ Ed: Gottlieb Danz II was the 6th generation of family ocularists

There were times when a glass eye patient, who did not want to change to a plastic eye, would need a replacement prosthesis and my father would come in to the office and blow a glass eye for the patient. I was mesmerized watching the process of manipulating the creolite glass in the flame with constant rotation, blowing on the hollow stem and the addition of the various colored glass for the sclera and iris. My father's final determination of the shape by drawing in the back surface with the proper periphery was a true artist at work. This was the *Müller-Uri* tradition.

While working in the lab, I became more exposed to the aspects of the fabrication of ocular prostheses and enjoyed with much enthusiasm the process of constructing a prosthetic eye. I remember my brother Ted and Phil allowing me to be in the fitting room with a patient who asked me if I wanted to become an ophthalmologist. I said, "I think so" to which the patient said, "Of course you do. You are a Danz!" I do not know if that triggered my decision or if it was a genetic-based decision to continue in the "Danz Glass Eye Legacy", but I decided to become an ophthalmologist.

I also was engaged to my future wife, Bobbie, who as it turns out was born in the same hospital as me, at St. Francis Hospital, San Francisco. My father had said I could not get married until I had my college degree so I completed my Bachelor's degree, got married two months later and started my full time apprenticeship as an ophthalmologist. As it turns out, Bobbie's great uncle Milton had lost an eye due to an automobile accident and had his glass eye made by my father. Bobbie's family and mine were now connected by marriage and a glass eye.

Glass Eye Fabrication

William A. Danz



"My Dad's eye making stuff"



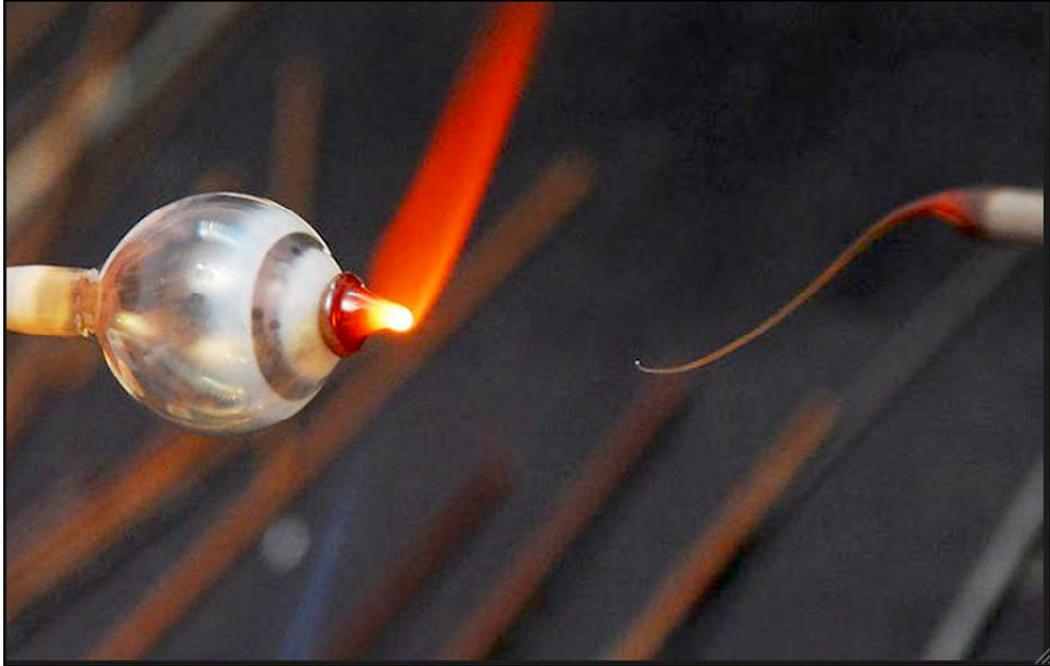


Fabrication of Glass Prosthetics



Glass Blowing Eye Globe, Lauscha, Germany

www.lauscha.com



Shaping Iris Button on Globe
www.lauscha.com







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<http://www.buymarbles.com/marblealan/lauscha.html>

- Cambodian Shiva God – 3rd Eye:
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- Chakra's Meanings:
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[http://en.wikipedia.org/wiki/Charon%27s_obol#mediaviewer/File:Charon_and_Psyche_\(cropped\).jpg](http://en.wikipedia.org/wiki/Charon%27s_obol#mediaviewer/File:Charon_and_Psyche_(cropped).jpg)

- Eye of Horus:
http://en.wikipedia.org/wiki/Charon%27s_obol#mediaviewer/File:Eye_Horus_Louvre_Sb3566.jpg

- Functional Impression Technique for an Ocular Prosthesis:
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3332313/>

- Heart As Light As A Feather:
<http://yourpsychicself.blogspot.com/2010/05/is-your-heart-as-light-as-feather.html>

<https://www.innerself.com/content/self-help/behavior-modification/creating-realities/5602-lightheart-by-alan-cohen.html>

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