

THE PUZZLING ROCKY HISTORY OF THE WORLD

A Summary of Ideas by John Mackay

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INTRODUCTION

Welcome to the history of the world as we journey through the minds of those who have contributed to the way Geologists (and therefore Biologists, Physicists, Theologians, etc.) think about it. You will find it sometimes unexpected, occasionally revealing, sometimes dull, but always intriguing as we trace the thought patterns behind the key players whose influence has been overwhelming and whose intellectual journey has produced a strange paradox shown in the **Outline Summary** below.

OUTLINE SUMMARY - The Path of Conflict

STENO	RAY / HOOKE	WOODWARD	CUVIER	HUTTON & LYELL	DARWIN et al.
1669	1691/1705	1695	1808	1785, 1830	1859 to 2000
Layer at the bottom got there first. Layers deposited horizontally.	Animals in bottom layer lived before animals in the next layer. Sequential layers imply “old earth”.	Proved fossils real creatures. Postulated strata gravity sorting via Noah's Flood.	Animals in lower layers lived and died before animals in next layer. Suggests multiple creations and catastrophes.	Rock record is history of world and vast ages of present type processes involved in formation of Geologic Column.	Life in bottom layer evolved into life in top layer over very long time span.
Accepts Creation, Flood and Biblical History.	Implied questioning of Biblical Chronology.	Accepted Creation, Flood, Catastrophism	Modified acceptance of Biblical Chronology	Reject Flood and Biblical Chronology, Anti-catastrophic.	Rejects Creation, Flood and all Biblical chronology.

THE PUZZLE: How can a series of logically related steps from Creationist Steno to Evolutionist Darwin and his present followers produce such mutually exclusive views on the origin and history of the world?

SOME BACKGROUND

- A) Date confusion.** A search of available Geological literature will often reveal multiple dates (and sometimes varied titles) for the same publication or concept. In most cases these turn out not to be contradictions or errors since the dates vary depending on whether the event being referred to is:
- a) the date the idea was first expressed;
 - b) the date the idea was first presented to a “science gathering” or society;
 - c) the date the proceedings were first published;
 - d) the date the idea first appeared in book form under the author’s name; (i.e. 1785 Huttons “Theory of the Earth” read to Royal Society of Edinburgh; 1788 Huttons “Theory of the Earth” Vol 1 published in Transactions of Royal Society of Edinburgh; 1795 Huttons “Theory of the Earth” published as 2 volumes)
 - e) the date of the edition being referred to or the date the work first appeared in a language the “current expert” could read.
 - f) In the most extreme cases dates can vary by centuries, where research has uncovered originals. (eg. Mercati (Italy) 1574, not published till 1719, or George Owen (UK) Systematic Observations on Strata 1576 [published 1796]).
- B)** Add to the above, uncorrected accumulations of typographical errors, i.e. 1865 instead of 1856, plus the fact that my secretary had to ‘translate’ my handwriting, which has not been checked against originals as I departed Australia before this ‘rough draft’ was completed, along with ‘helpful’ computers that delete/scramble text, and the field is wide open for confusion.
- C) References:** Where no source is shown for a concept, it is because the thought can be found commonly in books on Geological History, or at present no original source has been found for the thought apart from Encyclopaedias/ Geological Dictionaries, Texts, etc. Where no information is shown in any one column space, it is either because none has been found, or no consistently reliable sources agree with each other.
- D) Changes in meaning** One other trend is observed: words change meaning with time, i.e. Geology originally referred to things earthly as opposed to things heavenly (Theology).
- E) Key players** in this rocky field of Geological ideas get **bold text**.
- F) This text** includes only a chronicle of ideas, not evidence for or against them. That is the subject of the lecture in support of the last entry and the reasoning behind my final conclusion.

I trust you enjoy it. If you spot any errors, please email the address on the first page.

John Mackay

Edinburgh, Scotland. October 2000AD

HISTORY OF GEOLOGICAL THOUGHT

DATE					
PERSON	Pythagoras 582 - 497 BC	Herodatus 384 - 322 BC	Aristotle	Theoprastus	Pliney the Elder 23 - 79 AD
NATIONALITY	Greek	Greek	Greek	Greek Student of Aristotle	Greek
CONCEPT	Sea shells on mountains - indicate once under sea	Shells inland Egypt - Indicate once under sea		Fossil bones formed by plastic forces in earth“vis plastica”	Fossils shells/sponges - grew in ground. “vis plastica”
DETAILS				Possibly derived from views on Spontaneous Generation.This view dominates Europe for almost 1600 years.	Called fossil shark teeth ‘Glossopetra’ - tongue stones - this name endured to 1600’s.
SOURCE	Writings of Ovid Date			Via other Greek writers such as Pliney	from “The Naturall Historie of C. Plinus Secundus” Tr by Dr P Holland 1601/1634
CONTRIBUTIONS TO GEOLOGIC COLUMN	None	None		None	None
RELIGION	Pagan	Pagan	Commenced as Platonic Monotheist, finished as mystic naturalist		

HISTORY OF GEOLOGICAL THOUGHT

DATE		200 - 1100	500	1133	
PERSON	Tertullian 155 -222AD		Litao - Yuan		Albertus Magnus 1193 - 1280
NATIONALITY			Chinese	Chinese	German
CONCEPT	Fossils Real creatures, buried by Noah's Flood based on shell beds on mountaintops.	Almost nothing known of new concepts in geology from this time.	"Stone fish" fossils still smell	'Fish' fossils at Thanchow	Fossils are animals 'changed into stone' (based on tr. of Moslem Avicenna (980 - 1037)
DETAILS				See Taylor p.15 Quote Text p.10	Revived Aristotle's ideas on fossils in Europe.
SOURCE	"De Pallio"		Shui Ching Chu . Ch 38 p3a	Yun Lin Shih Phu Ch. 2, p.1a Science & civilization in China. Quoted in Dr Needham 1959 Cambridge 3:612	De Mineralibus at rebus metallicis. Lib 1 cap 9
CONTRIBUTIONS TO GEOLOGIC COLUMN			no influence on West	no influence on West	
RELIGION					

HISTORY OF GEOLOGICAL THOUGHT - MIDDLE AGES

DATE		1535 -1536	1546 1556?	1565	1574
PERSON	Da Vinci 1452 - 1519	Martin Luther 1483 - 1546	Agricola George Bauer 1494 - 1555 (56?)	Conrad Gesner 1516 - 1565	Michele Mercati 1541 - 1593
NATIONALITY	Italian	German	German (Saxon)	Swiss	Italy
CONCEPT	Fossils real, but not from Noah's Flood	Fossil wood is actual tree turned to stone, from Noah's Flood. Based on his father's work as coal miner.	Treats some fossils as petrified creatures. Mostly follows Pliny Fossils made by plastic forces.	First woodcut illustrations of fossils - only descriptions previously.	Catalogues Vatican fossils, organised by Pope Sixtus V.
DETAILS	Glossopetra were fossil sharks teeth, not tongue stones		Father of mineralogy and metalurgy. Coined word 'fossil' (1555) for anything dug out of the earth. Invents terms "Ammonite" & "Belemite"		By 1800's Vatican would have one of the world's largest Fossil collections because of "Church" interest and Christian influence in Geology.
SOURCE		Lectures on Genesis Luther 1535 - 1536 Commentary on Genesis 1-5, Vol 1 Concordia 1958, 1987 p.98/9	De Natura fossilium 1546 De Re Metallica 1556	De Rerum Fossilium 1565	Metallotheca Vaticana Prep. 1574, pub. 1719
CONTRIBUTIONS TO GEOLOGIC COLUMN		The invention of printing and the Reformation made his ideas widespread.	None		None
RELIGION		Christian Creationist			

HISTORY OF GEOLOGICAL THOUGHT

DATE	1616	1657	1669	1669 (?)	1676 -1677
PERSON	Fabio Colonna 1567-1650	M P Escholt	Nicholas Steno (Nils Stensen) 1638-1687	Lhuyds 16?? -1709 (?)	Dr Robert Plot 1640 -1696 Prof. Chemistry Oxford
NATIONALITY	Italy		Danish	UK	UK
CONCEPT	Glossopetra = sharks teeth		Principal of Supersition First diagram of Rock Strata. Fossils real. Confirms sharks teeth analysis of Glossopetra.	Word “Lithostrotian” (fossil coral) defined as for present day.	Mostly follow Pliney Fossils made by plastic forces
DETAILS	First copper plate illustrations of fossils showing great detail.	First modern use of word Geology - prior use was to things earthly as opposed to spiritual	Assumes bottom sedimentary strata laid down before top. Inclined strata originally horizontal. Based on rocks in Western Italy.		
SOURCE		Geologica Norvegica 1657 UK ed 1663 by D. Collins	De Solido intra solidium Naturaliter Contento 1669. Also J.G. Winter, 1916	1669 Lithophylaiti Britannici Ichographia	Natural History of Oxfordshire 1677 N.H of Stafford- shire 1686
CONTRIBUTIONS TO GEOLOGIC COLUMN			Key assumptions still in use. Implicit uniformitarianism		None
RELIGION			Creationist Protestant, then Catholic Bishop		

HISTORY OF GEOLOGICAL THOUGHT

DATE	1683	1691	1695	1700	1665, 1705
PERSON	Dr Martin Lister 1638-1711	John Ray 1628 - 1705	John Woodward 1665 - 1728	Dr Charles Leigh	Robert Hooke 1635 - 1703
NATIONALITY	UK	UK	UK (independent funding)	UK	UK
CONCEPT	Conceived first map of geology, based on rock types of sands/clays. 'North parts of England'.	Suggested if Steno right "world is a great deal older than is imagined or believed". Fossils real	1. Fossils, were remains of real animals and plants. 2. Noah's Flood responsible 3. Gravity/density sorting - strata 4. Collected thousands of fossils - now in Sedgwick Museum of Geology, Cambridge Uni. UK.	Mostly follow Pliney Fossils made by plastic forces	Fossils could be used as basis of chronology. Hinted at index fossils & extinction. Fossils real
DETAILS	Fossils vis plastica	Devised classification schemes based on Biblical kind. 1691 Fossils petrified animals, but reverted to greek view later	Detailed work. Responsible for acceptance of fossils as real and Flood as origin.		Creatures in bottom layer lived before top layer. Suggested Ammonites like living Nautilus. First microscopic description of petrified wood to prove it real wood.
SOURCE	Communication to Royal Society 1684.	Taylor Ref. p.39 Travels p.107	Towards a Natural History of the Earth 1695	Natural History of Lancashire (date?)	1665 Micrographia Discourse on Earthquake Pub. 1705
CONTRIBUTIONS TO GEOLOGIC COLUMN					
RELIGION		Creationist	Creationist / Flood Geologist	Creationist Protestant	Creationist Protestant/Catholic

HISTORY OF GEOLOGICAL THOUGHT

DATE	1708-1709		1724		1719 1725
PERSON	Scheuchzer 1672-1733	Baier	Balthasar Ehrhart	Alfred Werner 1749-1817	John Strachey 1671-1743
NATIONALITY	Swiss	Swiss		German	UK
CONCEPT	Fossil real, not from plastic forces	Noah's flood the source of fossils.		Neptunist theories spread by students - mostly he didn't publish.	First papers on Rock order in South West UK.
DETAILS	Worked on fossil plants. Noah's Flood the origin	Collects and compares huge number of ammonites as proof that fossils are remains of real creatures.	Ammonites proved to be like modern Nautilus	Rocks such as volcanics were precipitated from water.	
SOURCE	Herbarium Diluvium 1709 Museum Diluvianum 1716	Nurberg Petrology	De Belemnitis Suevicis Dissertato 1724		
CONTRIBUTIONS TO GEOLOGIC COLUMN		Creation & Flood now entrenched as basis of Geology.		1787 - labels 'greywacke' - later transition/Cambrian	
RELIGION	Creationist Protestant/Catholic	Creation Flood Geology	Creation Flood Geology		

HISTORY OF GEOLOGICAL THOUGHT

DATE	1751	1759/60	1756	1762
PERSON	J-E Guettard 1715-1786	G. ARDUINO 1713 - 1795	Johann Lehmann 1719-1767	G C Fuschells 1722-1773
NATIONALITY	French	Italian	German	German
CONCEPT	First real geology map to Academy of Sciences	Rocks could be placed in three separate ‘event’ divisions which have occured one after the other.	3 orders of mountains (a) Creation (b) Flood (c) Volcanic	Differentiated strata of Thuringia on fossil basis for a geological map.
DETAILS		1759/60 Invents Rock Chronology or GEOLOGIC COLUMN.	Threefold division reinforced	20 strata = 9 divisions or event horizons sequential in time
SOURCE				A History of the Earth and Sea based on the mountains of Thuringia
CONTRIBUTIONS TO GEOLOGIC COLUMN		Unconsolidated - Present Tertiary -Post Flood Secondary - Flood Primary - Creation	Volcanic or Unconsolidated Tertiary (partly consolidated) Secondary or Transition (with fossils) Primary (Xtaline)	
RELIGION		Creationist		

HISTORY OF GEOLOGICAL THOUGHT

DATE	1768	1771	1777	1778
PERSON	Linnaeus Carl von Linne 1707 - 1798	Johann Walch 1724-1778	Peter S Pallas 1741-1811	J A DeLuc
NATIONALITY	Swedish	German	German	French
CONCEPT	Provides first system for classifying fossils - still in use.	Very accurate description & diagrams of fossil collections	3 rock “events” explain Ural Mts as/Arduino	Word Geology suggested as defining word for “the study of the earth.”
DETAILS	Classification based on Biblical kind as/Ray	Named Trilobites 1771		Attempts to reconcile Genesis with Geology
SOURCE	Systema Naturae 1748, 1768 (ed)	. Sammiving Von Merckwürdigkeiten		‘Lettres Physiques et Morales surles Montagnes et sur l’histoire de la Terre’ 1778
CONTRIBUTIONS TO GEOLOGIC COLUMN			Universal application of 3 divisions.	
RELIGION	Lutheran Creationist	Christian Diluvialist		

HISTORY OF GEOLOGICAL THOUGHT

DATE	1784	1785	1795	1805
PERSON	A Suckow	James Hutton 1726 - 1797	A von Humbolt 1769 - 1859	John Playfair 1748 - 1819
NATIONALITY		UK (Scot) (independent funding)	German	UK
CONCEPT	Coal fossil "calamites" related to present day Horsetails, but extinct	Present is the key to the past - Uniformitarianism "No vestige of a beginning concept, no prospect of end." Rejects Noah's Flood.	Coined Jurassique 1795 defined by J. von Buch 1839 Jurassic adopted 1850	Promotes (translates) Hutton's Uniformitarianism into more readable language.
DETAILS		Church regarded Hutton's works as atheism.	Based on rocks of Jura Mtns Europe	First to suggest rivers have eroded their own valley and that erratics carried by glaciers.
SOURCE		Paper 1785 (to Royal Society Edinburgh), book Theory of the Earth 1795		Illustrations of the Huttonian Theory 1802
CONTRIBUTIONS TO GEOLOGIC COLUMN		1787 discovers unconformity at Jedburgh (Scotland). 1788 Demonstration of Unconformity at Siccar Pt. (Scotland) as evidence of "UNIFORMITARIANISM" and old earth.	Unconsolidated Tertiary Secondary - Jurassic Primary	Hutton et al promote Plutonist theories. Neptunist ideas defeated by 1800
RELIGION				

HISTORY OF GEOLOGICAL THOUGHT

DATE	1805	1808	1809	1820/22
PERSON	William Smith 1769 -1839	Georges Cuvier 1769 - 1832	Jean Baptist Lamarck 1744-1829	Rev. W.D. Conybeare
NATIONALITY	UK	French	French	UK
CONCEPT	Fossils can show position of rocks in sequence. These were guide or “index” fossils	First major extinction concept from study of Vertebrate fossils in Paris basin 28 layers below Paris.	1800 - Aquired characteristics by use/disuse. Creationist until 1790's.	“Carboniferous” defined for coal areas 1822
DETAILS	“First” UK Geological Map recorded fossil content of strata as he built canals. Basis of 21 county maps 1819-1824.	Proposed multiple creations and catastrophies to explain different fossil content in sequential strata. Noah’s flood was last of catastrophies. Cuvier’s thoughts became French dogma for much of 19thC, excluding Darwin’s evolution.	Student of Buffon Worked on fossil shells. Fossils disappear - reappear in subsequent layers.	First “Account” of UK Geology 1820. Co-author William Phillips
SOURCE	Delineation of the Strata of England and Wales 1815	Rechercheson les Ossemens fossiles des quardrupedes 1812	Rechurches 1802 Philosophie Zoologic 1809	Outlines of Geology of England and Wales 1822
CONTRIBUTIONS TO GEOLOGIC COLUMN	no change	First major step to diminish Noah’s Flood as explanation of fossil record.	Moves further away from Creation / Flood explanation.	Tertiary Secondary - Jurassic Carboniferous - Primary -
RELIGION	Creationist	Creationist - old earth	Nominal Catholic - abandoning the faith	Creationist / Protestant

HISTORY OF GEOLOGICAL THOUGHT

DATE	1822/1830?	1829	1830	1833
PERSON	d'Halloy 1783-1875	Desnoyes	Lyell 1797 - 1875	Lyell 1797 - 1875
NATIONALITY	Belgian	French	UK	UK
CONCEPT	“Cretaceous” for chalky rocks Paris basin. Originally used for cliffs of Dover, UK.	Quaternary defined	Revives Hutton’s Uniformitarianism. Present processes can explain all, given time.	Defines “Epochs of time”. “Series of rocks” GC = history of earth.
DETAILS			Anti Catastrophic subvert aim to “Free science from Moses” (ref 1881 - his published letters - by sister)	Redefines Tertiary based on % fossils similar to present. Paris & London basins contained 3000 extinct & 5000 “living fossil” shells.
SOURCE			Principles of Geology 1830	
CONTRIBUTIONS TO GEOLOGIC COLUMN	Tertiary Secondary - Cretaceous - Jurassic - Carboniferous Primary	Quaternary Tertiary Secondary-Cretaceous - Jurassic - Carboniferous Primary	Lyell builds on Steno, and age of earth vastly increases.	Quaternary - Recent Tertiary - Pliocene - Miocene - Eocene Secondary-Cretaceous - Jurassic - Carboniferous Primary
RELIGION			Old Earth Creationist till Darwin’s time	Creationist till Darwin’s time

HISTORY OF GEOLOGICAL THOUGHT

DATE	1834	1834	1835/33?	1835
PERSON	F. von Alberti	D. de Blainville and E. F. von Waldheim	Sedgwick 1785 - 1879	Murchison 1792 -1871
NATIONALITY	German	French and German	UK	UK
CONCEPT	Triassic defined	Separate coining of same word “Paleontology” for study of fossils	Coins “Cambrian” Credits Yorkshire priest, John Mitchell, who noted sequence of rocks in Pennines Yorkshire.	Coins “Silurian”
DETAILS	Has three subdivisions, Sandstone based on Limestone Central Marl Germany		Based on rocks of Nth Wales. Ancient Roman name of Wales “Cymbria” Basis mostly Lithology	Based on rocks of Nth Wales. Honour ancient Welsh tribe “Silures” Basis mostly fossil
SOURCE			1835 Paper	1835 Paper 1839 Monograph
CONTRIBUTIONS TO GEOLOGIC COLUMN	Quaternary - recent Tertiary - Pliocene - Miocene - Eocene Secondary - Triassic - Jurassic - Cretaceous - Carboniferous Primary		Quaternary - recent Tertiary - Pliocene - Miocene - Eocene Secondary - Triassic - Cretaceous - Jurassic - Carboniferous - Cambrian Primary	Quaternary - recent Tertiary - Pliocene - Miocene - Eocene Secondary - Triassic - Jurassic - Cretaceous - Carboniferous - Silurian - Cambrian Primary
RELIGION				

HISTORY OF GEOLOGICAL THOUGHT

DATE	1836	1838	1839/40	1839
PERSON	Darwin	Sedgwick 1785 - 1879	Sedgwick 1785 - 1879 Murchison 1792 - 1871	Lyell 1797 - 1875
NATIONALITY	UK	UK	UK	UK
CONCEPT	Visits Australia	Coins "Paleozoic"	Coins "Devonian" Rocks in Devon & Cornwall - Showed fossils similar in Rhineland.	Coins "Pleistocene" for drift (later glacial) deposits
DETAILS	Explains Blue Mountain gorges as erosion caused by retreat of sea - not accepted at present.	Basis with or without fossils. Primary/Secondary begin to disappear.	UNIVERSILISATION OF GEOLOGIC COLUMN as realization occurs that Cuvier's 28 layers exist from Belfast to Moscow.	
SOURCE				
CONTRIBUTIONS TO GEOLOGIC COLUMN		Paleozoic	etc. Carboniferous Devonian Silurian	Pleistocene, added to Quaternary
RELIGION				

HISTORY OF GEOLOGICAL THOUGHT

DATE	1859	1841	1841/42	1840's
PERSON	Charles Darwin 1809 - 1882	Sir Richard Owen 1841 - 1892	Murchison 1792 -1871	Agassiz 1807 - 1873
NATIONALITY	UK independent funding	UK	UK (Scot)	
CONCEPT	Evolution concepts given acceptable basis of Natural Selection. Accepts Steno and Lyell.	Coins word "Dinosaur" 1841. World's leading fossil expert of his day	Coins "Permian"	Drift rocks not from Noah's Flood, but from Ice Age/s.
DETAILS	Species can have 'infinite' variation. Kept out of British Museum until Owen's death in 1892.	1856 - Ape/Man differences to R.I.G.B prevent relationship -anti Lyell & Darwin	Based on rocks above Carboniferous in Perm, Russia	Staunchly opposed to Darwin
SOURCE	Origin of the Species 1859	1855 Antropoid Apes & Relation to man R.I.G.B	NAS Moscow 1842. Geology of Russia in Europe and the Urals.	
GEOLOGIC COLUMN CONTRIBUTIONS	A non 'creation' principle for interpreting change in strata fossil content.		Permian inserted between Carboniferous and Jurassic.	
RELIGION		Creationist, old earth		Creationist

HISTORY OF GEOLOGICAL THOUGHT

DATE	1845	1888	1849	1854
PERSON	Rev. W B Clarke 1798-1878		Hugh Miller 1802 - 1856	
NATIONALITY	UK /Australia		UK Scot	
CONCEPT	Identifies first Silurian fossils Australia, Father of Australian Geology. Student of Sedgwick	Proterozoic = first life Holocene defined	fish deposits Scotland catastrophic Genesis days = epochs	“Oligocene” and “Precambrian” defined.
DETAILS	His work (1839-1879) forms basis for first geological map of NSW.	Supersition basis only	Anti Lyell Anti Uniformitarian Anti evolution Strongly Creationist	
SOURCE	Remarks on Sedimentary deposits of New South Wales, etc.		Footprints of the Creator 1849 Taylor 1841 app. 236	
CONTRIBUTIONS TO GEOLOGIC COLUMN				Oligocene Precambrian
RELIGION			Presbyterian (old earth)	

HISTORY OF GEOLOGICAL THOUGHT

DATE	1870	1874	1893 - 4	1872	1879
PERSON	A. Winshell 1824-1891		Johannes Walther 1860 - 1937	Dana	Lapworth
NATIONALITY	USA		German	USA	UK
CONCEPT	Mississippian for upper Carboniferous USA	Palaeocene defined	Delta formation model from Venice	Archaeozoic defined Archaen	“Ordovician” defined. Named after Celtic tribe Ordovici.
DETAILS			Strata prograde laterally not vertically. Therefore fossil order is not chronologically vertical	Promotes creation by evolution.	Based on rocks of Wales/Scotland. To resolve conflict between Sedg & Murch over Camb/Silurian
SOURCE	See: Sketches of Creation 1870 Doctrine of Evolution 1874 Preadamites 1880		See Vol. 3 p 974-1008 Part C Chapter 27-32 1893-94		
CONTRIBUTIONS TO GEOLOGIC COLUMN	Mississippian	Palaeocene	Implies Steno wrong	Archaen	Ordovician added between Cambrian and Silurian.
RELIGION	Theistic Evolutionist		Theistic Evolutionist	Theistic Evolution Promoter	

HISTORY OF GEOLOGICAL THOUGHT

DATE	1890	1907	1911 (as student) / 1946-47	1930 - 1960's
PERSON	A. Williams	Boltwood	Arthur Holmes	SDA's, Fundamentalists & Vilekovsky
NATIONALITY	USA	USA	UK	USA
CONCEPT	Pennsylvanian for Upper Carboniferous USA	U/Pb dating a possibility	Refines the U/Pb technique	Only source of catastrophic views on Geology - mostly old earth and rejected by mainstream.
DETAILS	1891 Pennsylvanian and Mississippian accepted USA only		Age of rocks increase	
SOURCE			Refined 1946/47 with F G Houtermans.	G. Pember Earth's Earliest Ages 1876 G. McCready-Price Fundamentals of Geology 1906 New Geology 1923
CONTRIBUTIONS TO GEOLOGIC COLUMN	Pennsylvanian			None
RELIGION				

HISTORY OF GEOLOGICAL THOUGHT

DATE	1960 - present	1983-85	1973,1993	1990
PERSON	Morris & Whitcomb	John Mackay & Andrew Snelling	Prof D Ager Died 1992	
NATIONALITY	USA	Australia	UK	
CONCEPT	Launch new era Genesis Flood and young earth Creationist and Geological views.	Rapid formation of coal. Strata by catastrophic deposition.	Admits problem that old catastrophists were better observers than all uniformitarians, but still accepts evolution and vast age of the earth.	Darwins statue removed from foyer of British Museum and placed under staircase.
DETAILS			Stresses Geological Column full of gaps.	
SOURCE	The Genesis Flood and other publications from The Institute of Creation Research.	Papers to Sydney Basin Coal Conference and International Coal Conference	Nature of the Stratigraphic Record and New Catastrophism (both published by Cambridge Uni Press)	
CONTRIBUTIONS TO GEOLOGIC COLUMN	Establishment rejects or ignores.		Encouraged acceptance of catastrophic processes.	
RELIGION		Christian Protestant		

HISTORY OF GEOLOGICAL THOUGHT

DATE	1991	1986-97	1995-1999	2000
PERSON	Mackay	Guy Berthault 1921- Pierre Julian	Mackay / Robert Powell	Mackay
NATIONALITY	Australia	French	Australia / USA	Australia
CONCEPT	The evidence of catastrophic stratification via Noah's Flood	Experiments with 'discrete particles' to show (a) Strata not formed sequentially one on another, and (b) strata can form on incline over 30 ⁰ in moving current.	Fossil evidence for rapid and simultaneous formation of strata.	The present world view of Geology has irresolvable conflicts with reality . The end of the Steno / Lyell / Darwin paradigm is in sight? .
DETAILS		Based on Walther 1893 - 4 Steno wrong when current involved. No proven application to indiscrete particles or non-delta.	To Geological groups USA, Canada, UK	. A new world view needed to explain the Geologic Column
SOURCE	To Association of Geological & Earth Sciences Oxford UK.	Fundamental experiment on Stratification to French Academy Science 1986,88, to Geological Society France 1993 and National Congress of Sedimentology 1994, Powders and Grains Conference USA 1997.		Cambridge UK
CONTRIBUTIONS TO GEOLOGIC COLUMN		Suggests Steno/Lyell/DarwinGeologic Column invalid?		
RELIGION		Catholic	Christian Protestant	

SUMMARY OF SLIDE LECTURE

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The 80 slides featured geological sites we have researched and photographed around the world. The global field trip began at Huttons Sil - Dev unconformities, at Jedburgh and Siccar Point, UK and proceeded through the Cambrian/Precambrian unconformities seen in the USA: Arizona - Grand Canyon, Missouri - Sth St Louis, Tennessee - Smoky Mtns; Canada: Ontario - Nth East of Toronto, and Romania. Also visited were the Jurassic/Miocene unconformities on the East and West Coast of the North Island of New Zealand, the Carboniferous/Triassic Unconformities of Eastern and Western Queensland Australia, the Precambrian to present sequence of Unconformities at Hallets Cove South Australia and the complete sequences from Precambrian through every expected strata of the orthodox geologic column, observed in oil well drill holes from Nth Dakota USA. In each case the geological sequences were analysed to determine (a) the effect of missing strata on the Theory of Evolution and (b) what time was not recorded by strata, analysed as a percentage of time preserved in the exposure.

The analysis was based on the fact that we currently view the Geologic Column through the glasses or the paradigm provided by Steno, Hutton, Lyell and Darwin. Using this world view to interpret the Geologic sequence does result in interpreting the amount of time passed since deposition of the bottom rocks in the Grand Canyon, USA as upwards of 2000 million years. Wearing the same glasses produces the odd result that the column must also be interpreted as meaning that upwards of 95% of that time has left NO STRATA record in the Grand Canyon. A similar dilemma occurs at Hallets Cove, Australia where approximately 600 million years of time has left approximately 1% of rock activity preserved as a strata record. In fact the conclusion must be reached that this same dilemma occurs in every location we can analyse. Comparing the percentage of believed time preserved in the rock strata with the supposed time taken to form any strata sequence of the Geologic column, the vast ages believed to have passed since the bottom of the column was formed have resulted in only a fraction of the 'time passed' leaving any record in the strata. It is our contention that is an indication that the Steno/Hutton/Lyell/Darwin paradigm is invalid and in need of replacing.

CONCLUSION TO CAMBRIDGE LECTURE

It is obvious that the history of the world proposed by Darwin, who built on Lyell and Hutton, is in contradiction with a literal reading of the Creation/Flood account in Genesis. It is also very evident that any conclusion based on Lyell (whose subvert aim was to “free the science of Geology from Moses”), or Hutton (whose claim was the rocks showed “no vestige of a beginning and no prospect of an end”), could not but contradict Genesis, whose traditional author is Moses who openly proclaims ‘a created sudden beginning (Gen. 1:1) and an implied sudden end’ (Gen. 8:22). What should catch everybody’s attention, but rarely does, is that Lyell and Hutton were at pains to be logically consistent with their foundational but unstated assumption - Steno is right.

Nicholas Steno (1638 - 1687) was a creationist. His ideas of supersition have been held to be so ‘self evident’ that nobody tests them empirically. His supersition concept has ultimately led to the logical necessity of vast ages, the acceptance of Huttonian/Lyellian uniformitarianism and consequent rejection of catastrophic concepts such as creation and Noah’s Flood, along with acceptance of Darwinian concepts of evolution. Steno had no idea that his simple concept of strata formation could have led to concepts paradoxically opposed to almost everything he stood for. Over three centuries later it is becoming evident that if Steno didn’t get it ‘right’, therefore Hutton/Lyell, then Darwin who built on Steno’s foundation, have constructed straw houses built on sand.

The time is ripe for a new world view in Geology - **A NEW PARADIGM**. Steno’s case is a solemn reminder that much of the conflict between Christianity and science over the past 4 centuries has grown from a wrong geological concept on the origin of rocks, conceived by a man who became a bishop in the church, a person whom many in the Catholic church have sought to elevate to sainthood. Peace between science and Christianity can only be possible if a New World order for Geology - **THE NEW PARADIGM** - has foundations based on the real history of the world.

The purpose of this rough draft of ideas has been to point out the necessity and to give you the courage to take the bold next step into a New Paradigm which should open up a new world of concepts and projects for geologists as well as any number of Ph.D topics for students. Go for it!

John Mackay

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PS 1. One consequence of the above contention may be to ruin Steno’s chances of being declared a Catholic saint. The devil’s advocate should be pleased.

PS 2. It would also be enlightening to uncover what seems to be a link between those who were ‘independently funded’ and those who have had most influence in Geology. There might be another lesson to learn.