

Origins of Ocean Basins

Point of departure is the molten earth (spherical) & **Soliquidous** state (plastic) 4th state of

matter.

- (1) **Baked applied theory**: Contracting Earth hot to cool - skin contracts and breaks forming uplift & depression (Mountains & Valleys)
- (2) **Earth Cool & Gets Hotter**: heat causes plateaus to up thrust "thickest part of the US under Black Hills of Dakotas & not under the Rocky Mountains
- (3) **Expanding Earth**: more heat and less gravity pull - tension causes breaks and the more heat equals more splits
- (4) **Convection Current**: Bottom of the mantle more pliable and hotter than upper Regions = heat sources is radio active (4 cells 2N + 2S Hemisphere Heat flows to the surface - cooler under the continents than under the oceans (MOHO concepts))

MOHO mantle and crust:

Mid Atlantic Ridge (12.000 feet High)

High use thru Mono: Surface

Crumbles: new outer layer

Skin and Valley: High points from ridges & rises

1/50 inch per year movement. This movement can explain the continental drift a Gondwanaland Hypothesis of One continent.

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The Pacific Basin is getting smaller if Atlantic pulling apart coastal mountains crumbling

in California.

(Steep planes on sub cause this)

Hot Spots (1) Easter Islands reef (1200 miles in diameter)

(2) Hawaii Islands

Magnetic orientation of geo surfaces Pauffer shows 700-mile slippage in the zones of the

Pacific.

Sema (Silicon & Plastic) in motion

A Geological View of Cape Cod

National History Press

Gande City

New York

Museum of National History

1966

Arthur N.Stackler

Depth of H2O Ocean Basin is dependent upon:

(1) Druonal tidal waves fluctuation (see later)

(2) Glacial conditions (4 gradual ice ages) (11/2 million years ago)

Wisconsin glacier ?0 level 330 feet in North East according to CH dating of paliobotany

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fossils - increase in H₂O level at 40 feet per 100 years. Sea level utilized in approximately

850 years.

The question is are we at the end of one ice age or the beginning of another

If icecaps melts then increase in sea level of 300 feet (Iceland & Greenland) added

weight causes ocean basin to sink and land to rise if Antarctica melted add 400 feet 300 +

400 feet = 700 feet increases in sea level

Continental Shelf:

Sediment Rock

(1) Geology

(2) Navigation Problems/Aids

(3) Fishing Areas

In 1946 US took over mineral rights to continental shelf

Defined as shallow H₂O out to 100 fathoms wave (approximately 200 miles) 600 feet

In 1953 International Committee on nomenclature of Ocean Bottoms defined shelf as

"zone around continents extending from low ?0 line to a depth at which there is a

marked increase of slope to grater depth"

(Slope = Continual slope)

UNESCO suggests 600 or 200 fathoms

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