

2012

MAY

FRIDAY

MAY 20 • 130 22°

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APRIL 2012

18 Biogenetic law

of Haeckel:-

Ontogeny (embryonic development of the individual) is a concise and compressed recapitulation of phylogeny (the ancestral sequence).

An individual repeats during the rapid and short course of its embryonic development, the most important of the forms - changes which its ancestors traversed during the long and slow course

of their palaces - 19
 ntological evolution. in accor-
 dance with the laws of heredity
 and adaptations.

Support of this Theory :-

Haeckel and many embryo-
 logists put forward many
 evidences in support of rep
 recapitulation theory. These
 are - ① Existance of close
 similarity between embryos
 of diff^t vertebrates in early
 stages of development.

2012

MAY

MONDAY

Wk 21 • 142-224

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APRIL 2012

21 (2) The heart

in vertebrate series is built

on common basic plan. It

consists of two portions —

receiving parts and forwarding

parts consists of ventricle and

conus arteriosus. (3) In

embryonic stages of all verte-

brates, the arterial arches

are alike. and there are six

pairs of arterial arches.

(4) Gill slits are present

all vertebrate embryos.

(5) Tadpole larva of frog

resemble to fish.

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JUNE 2012

2012
MAY
22 TUESDAY
143-223 • Wk 21

④ Mollusca and annelida pass through trochophore larva stage.

⑤ In vertebrates, nervous system originates by infolding of dorsal ectoderm.

⑥ The vertebrae in different vertebrates develop from the same source and in a similar way.

Present status of Biogenetic Law —

The Haeckel's theory

2012

MAY

WEDNESDAY

WA 21 • 144 222

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APRIL 2012

new branch of embryological studies — the 'experimental embryology'. Now a days his original ideas are not taken as such but has been modified. As the embryonic development is an epigenetic phenomenon, superficial similarities between the embryos are likely to be present. Haeckel's recapitulation theory can presently be interpreted as 'The individual's develop

2012

MAY

WEDNESDAY

Wk 21 • 144-222

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APRIL 2012

9 am
10 am
11 am
12 noon
1 pm
2 pm
3 pm
4 pm
5 pm
6 pm

New branch of embryological studies — the 'experimental embryology'. Now a days his original ideas are not taken as such but has been modified. As the embryonic development is an epigenetic phenomenon, superficial similarities between the embryos are likely to be present. Haeckel's recapitulation theory can presently be interpreted as 'The individual's develop-

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JUNE 2012

2012

MAY

THURSDAY

145-221 • Wk 21

mental pages 24

(ontogeny) may at best repeat
the ontogenetic stages of the
racial forms (phylogeny) and
not the phylogenetic stages as
such, hence comparative

The embryos of higher animals
repeat the embryonic states of

their ancestor. Hence comparative

embryology of animals is giving a

strong support to the theory

of organic evolution.

Embryological evidence are

also present available in plants,

Mosses and ferns are more.

2012

MAY

FRIDAY

WK 21 • 146 220

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Complex Thom

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APRIL 2012

9 am algae. The embryos of mosses

10 am and ferns are respectively

11 am known as protonema and

12 noon prothallus. Protonema of

1 pm mosses are resembles in

2 pm certain algae. This suggest

3 pm their evolutionary relationship.

4 pm Gymnosperms do not require

5 pm water for fertilization but

6 pm the primitive gymnosperms

like Cycas and Ginkgo

possess ciliated sperm

as found in the petri do-

phytes. This provides an

2012

MAY

SATURDAY

147 219 • Wk 21

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JUNE 2012

evidence that **26**

gymnosperms have evolved from pteridophytes like ancestors.

Thus the embryology of animals and plants gives strongest support to the theory of evolution.

na —

SUNDAY 27