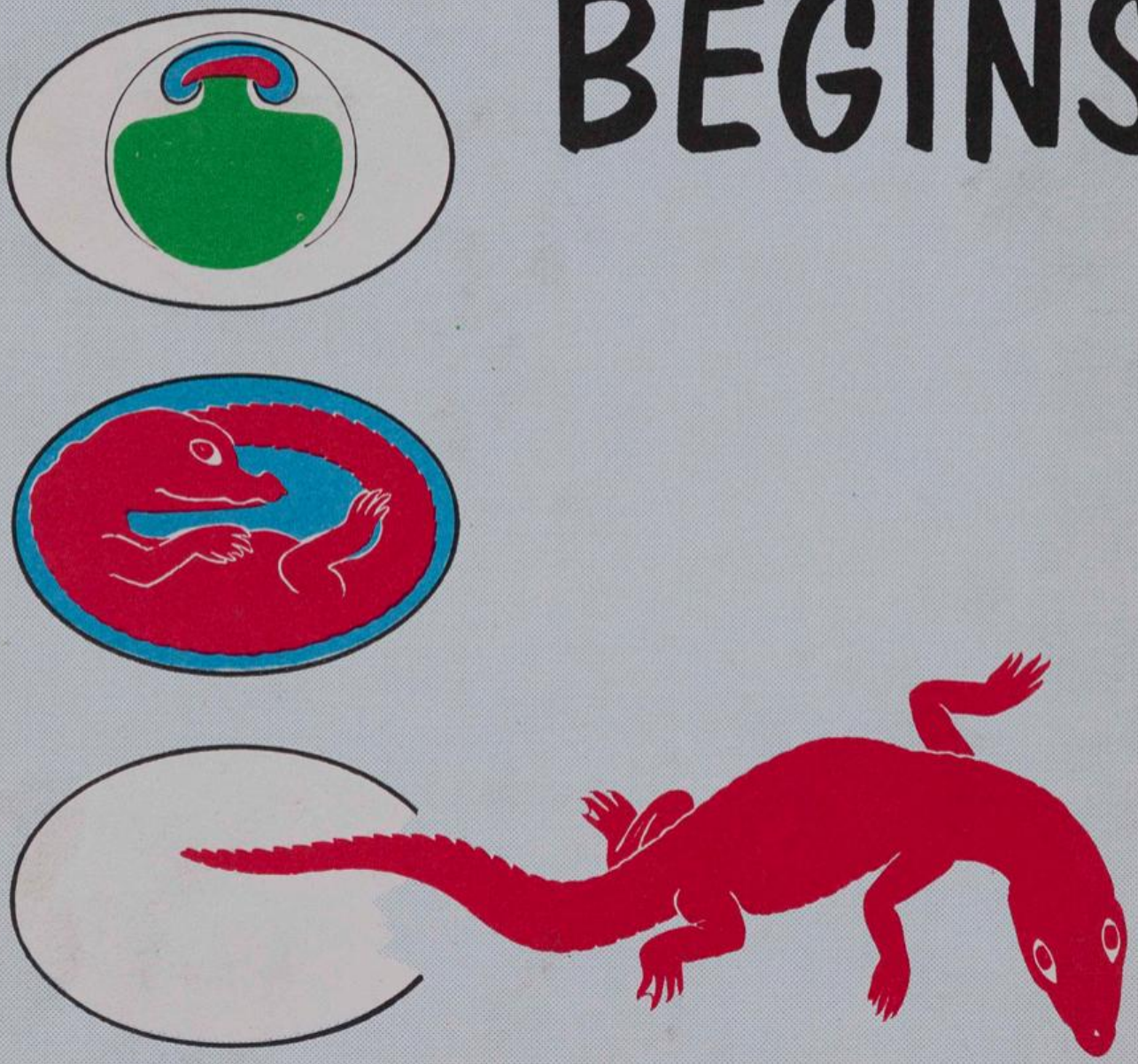
A NEW LIFE BEGINS



A MAX PARRISH COLOUR BOOK

THE SIMPLE STORY

of how some sea-creatures, insects and reptiles are formed and how animals and humans are born. All children have asked their parents questions on these lines. Here, in clear, simple pictures and straightforward language, Marie Neurath gives the answers.

We look through a microscope as the tiny bud becomes a hydra. We see the young crocodile boring through its shell. We watch the minute kangaroo, smaller even than your little finger, finding its way into the mother's pouch. Here is the safe, self-contained world in which a human baby grows.

10-14

See back flap for other titles

8/6
NET
LIBRARY
EDITION

THE SIMI

of how son
sects and rej
how animals
All children
ents question
in clear, s
straightforwa
Neurath giv

We look thr
the tiny bud
see the yo
through its
minute kang
your little fi
into the m
is the safe,
in which a

10-14

See back
other title

A New Life Begins

THI

of h
sects
how
All
ents
in
strai
Neu

We
the
see
thro
min
you
into
is t
in v

10-1



ISOTYPE

© MAX PARRISH & CO LTD 1961 · PRINTED IN GREAT BRITAIN BY

A NEW LIFE BEGINS

Marie Neurath



FLETCHER & SON LTD · NORWICH

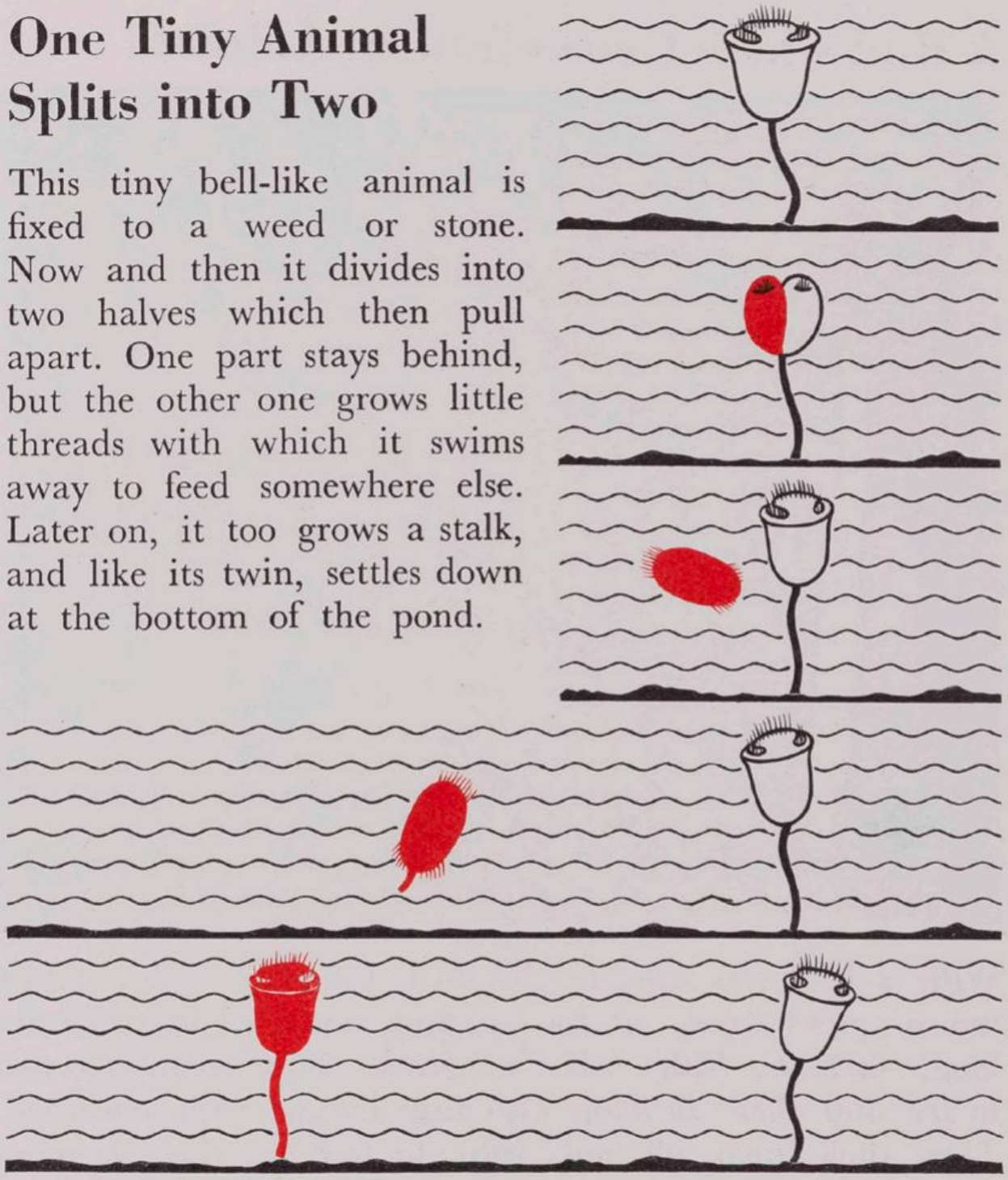
Max Parrish London

LIST OF CONTENTS

One Tiny Animal Splits into Two	5
A Bud which Grows into an Animal	6
Two Different Buds Start a New Life	7
The Floating Serpent Star Settles Down	8
Growing Up With Food Stores, or Without	10
Parents that Crawl with Young that Swim	12
A Family Likeness Right from the Start	13
Forty Thousand Eggs, or Just a Few	14
From Life in Water to Life on Land	16
The "Pond" Within the Shell of an Egg	18
A Savage, Scaly Youngster Breaks Through a Hard Shell	20
A Special Pocket as a Portable Nest	22
The Kangaroo No Bigger than Your Finger	24
An Unborn Rabbit Feeds and Grows	26
A Fur-lined Nest for a New-born Family	28
How a Baby Lives Before It is Born	30
A Baby Comes into the World	32
When Two Babies are Born Together	34
Twins are Not Always Very Much Alike	35
Baby Feeds in Mother's Arms	36

One Tiny Animal Splits into Two

This tiny bell-like animal is fixed to a weed or stone. Now and then it divides into two halves which then pull apart. One part stays behind, but the other one grows little threads with which it swims away to feed somewhere else. Later on, it too grows a stalk, and like its twin, settles down at the bottom of the pond.

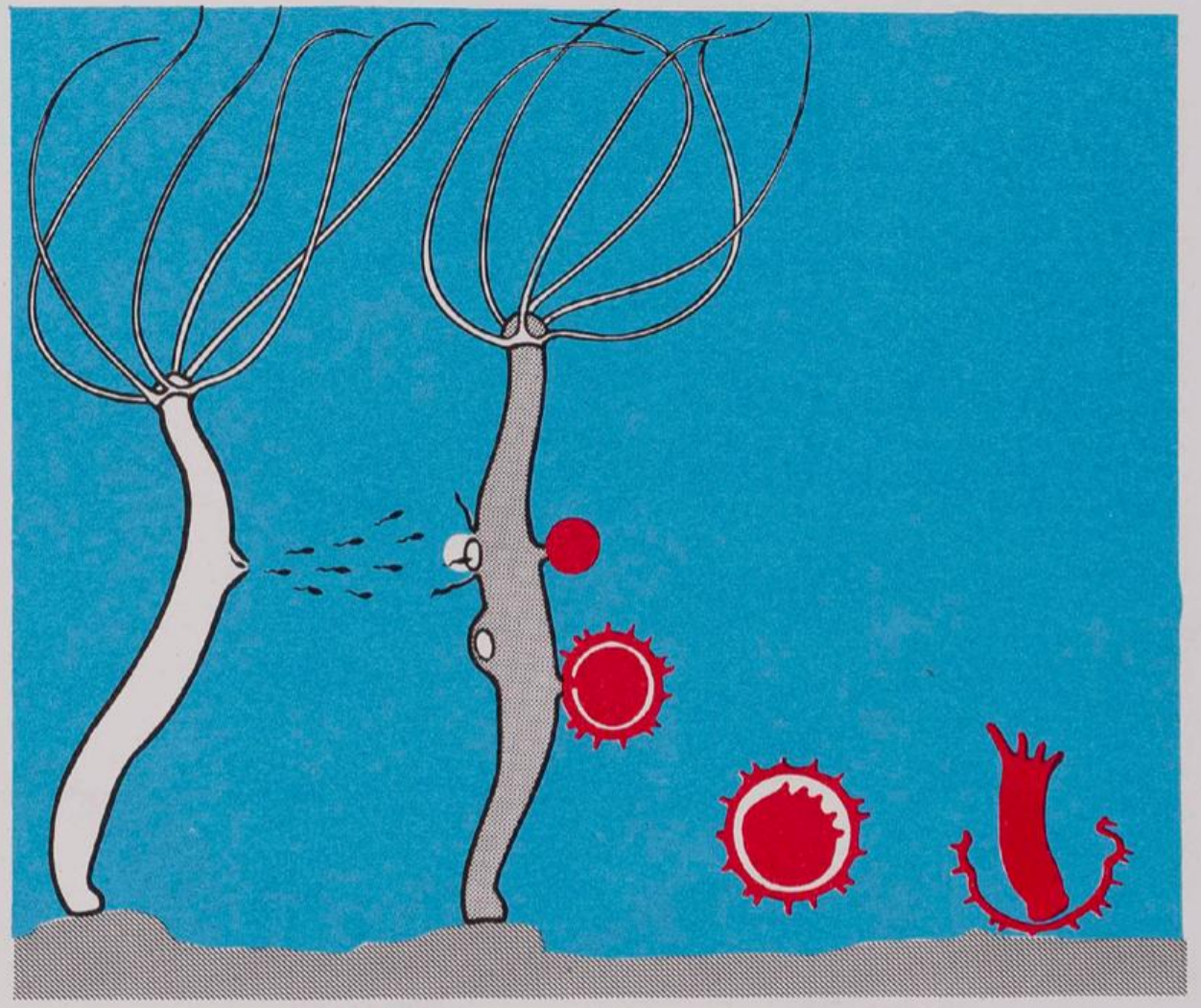


A Bud which Grows into an Animal



With a lens you can see this little tube-like hydra clinging to pond weeds. It has stinging tentacles to catch its food, such as little fish. Sometimes buds grow on the hydra and these develop into tiny hydras with tentacles. They then break off and begin to feed on their own.

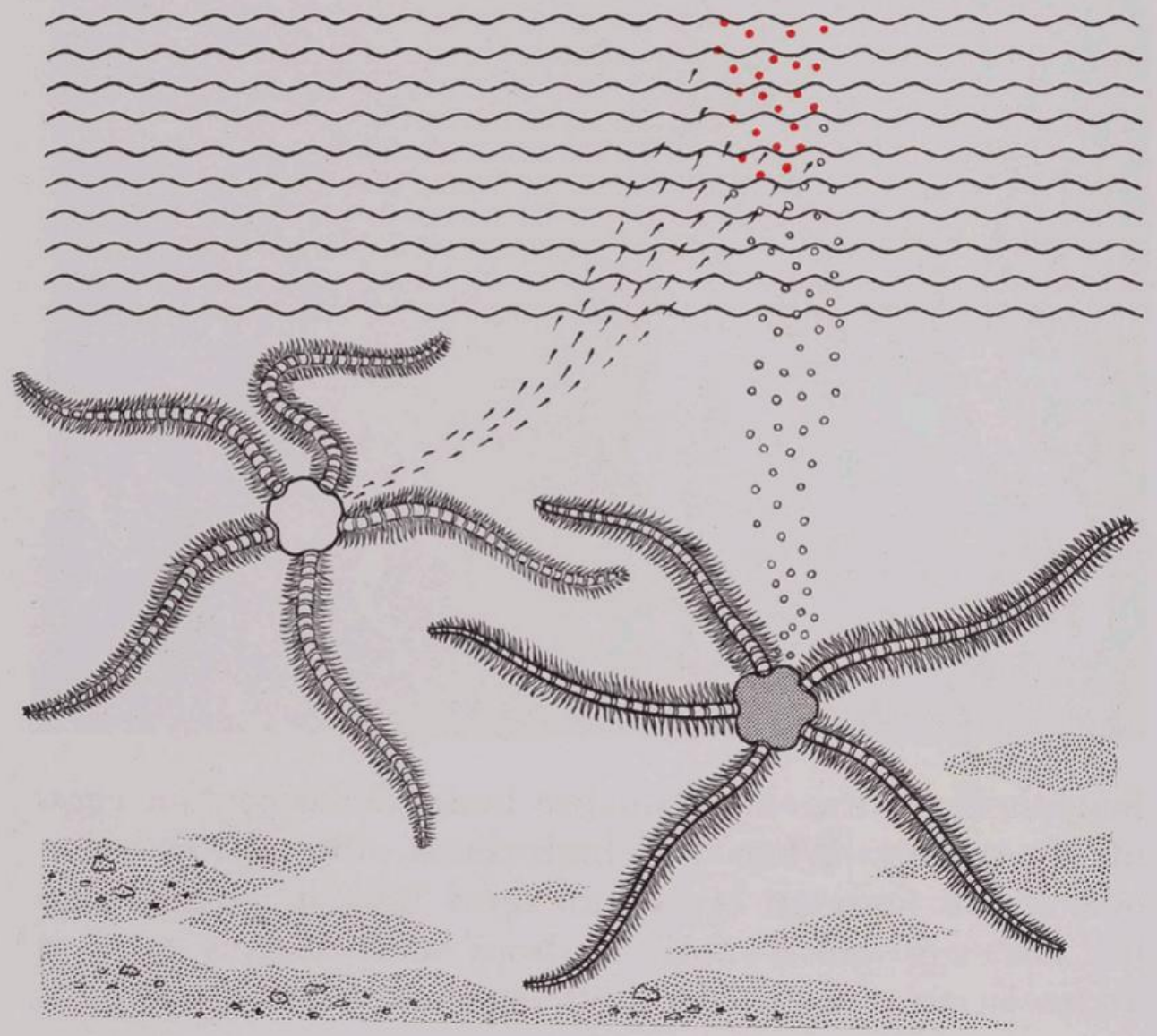
Two Different Buds Start a New Life

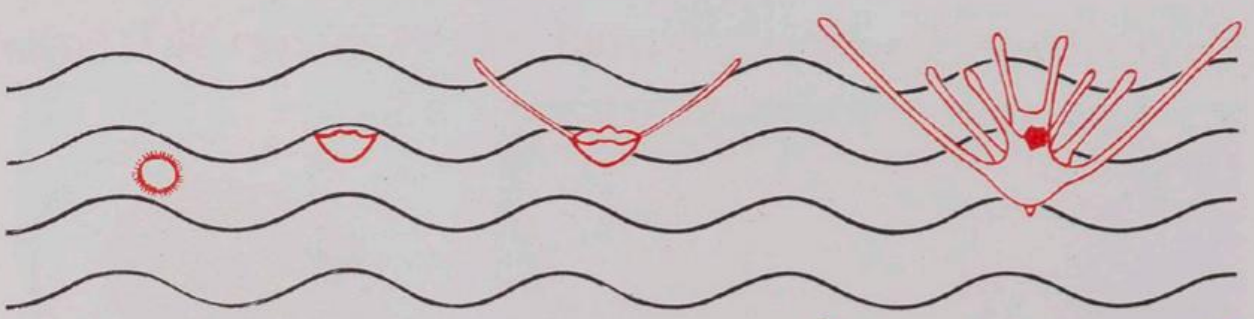


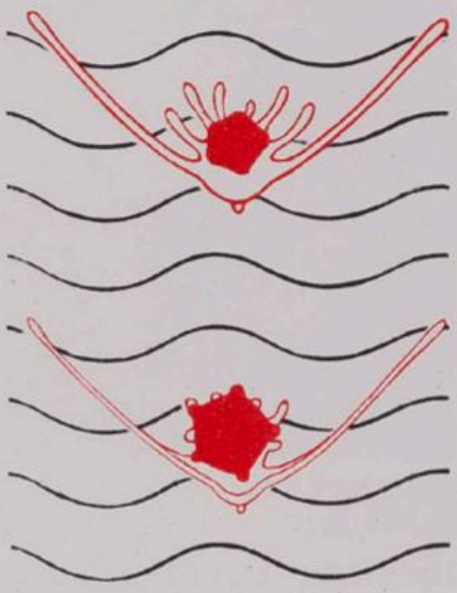
Sometimes hydras have smaller buds. Some contain eggs, others sperms. When the buds burst, the sperms swim out; if one finds an egg in an open bud, it wriggles into it. The egg grows until it drops and currents carry it away. In some weeks, its shell bursts; out comes a hydra.

The Floating Serpent Star Settles Down

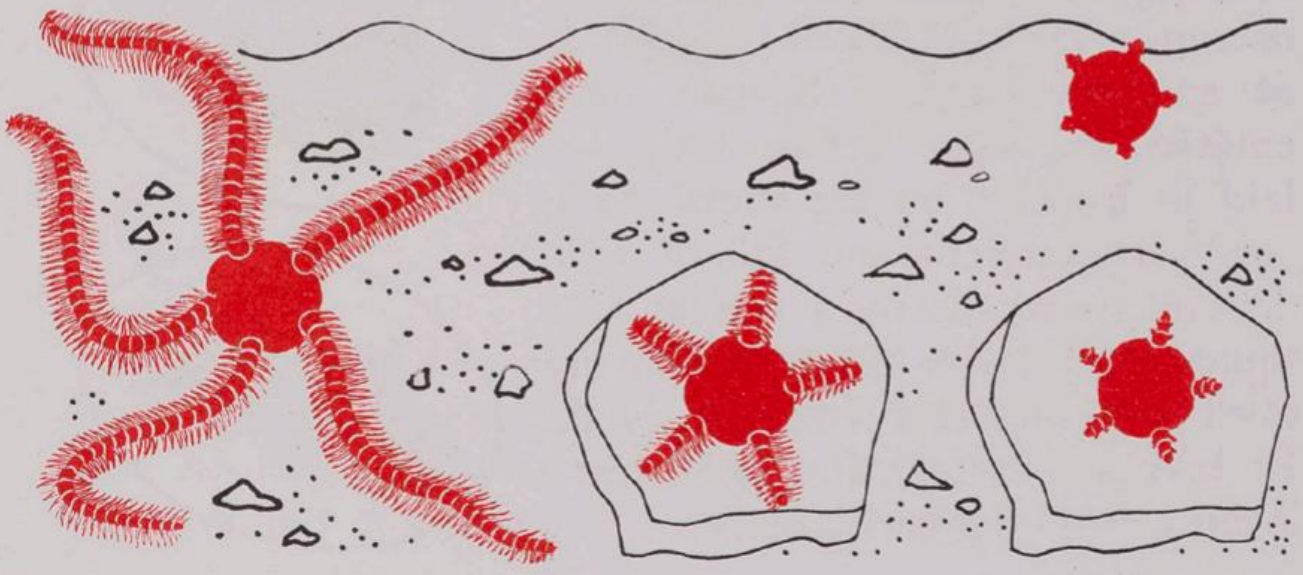
The female serpent star squeezes out her tiny eggs into the water. Sperms, even smaller, are shed by the male. When a sperm wriggles into an egg, the egg can start to grow.



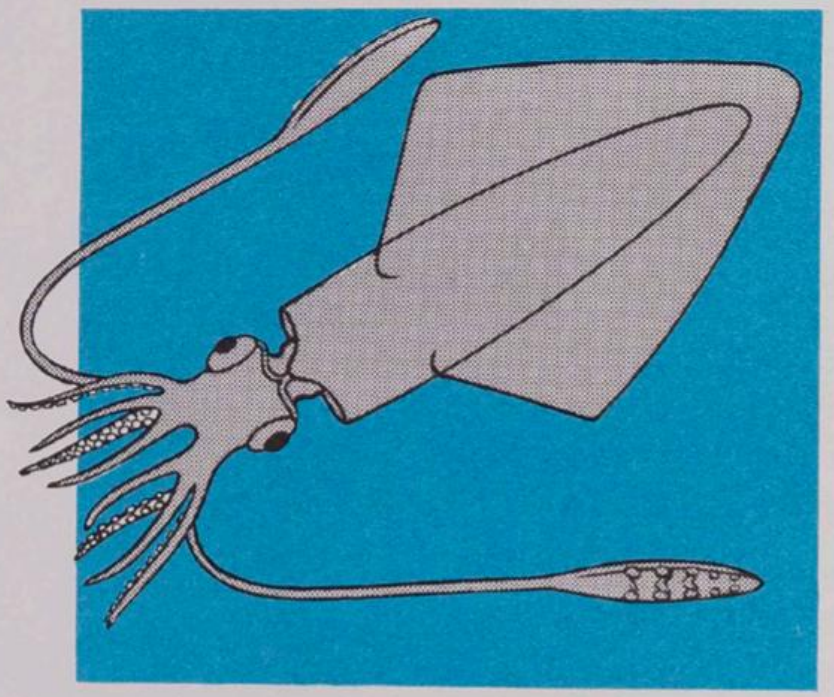


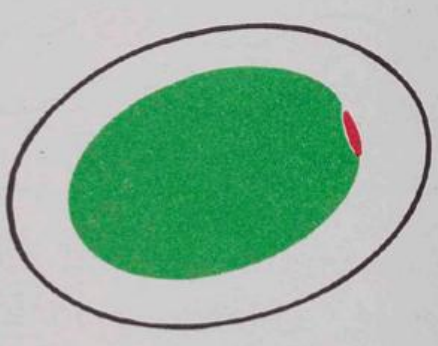


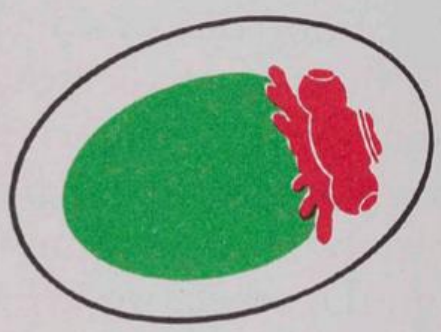
The young serpent star, shown very much enlarged, looks quite different from the adult. It floats about on the top of the sea, like a dandelion seed in air. It feeds there for several weeks changing almost completely. Six swimming arms shrink up: the other two are cast off. It then falls to the bottom of the sea and finishes growing into a serpent star.



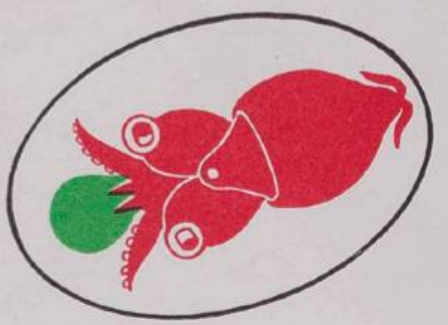
Growing Up With Food Stores, or Without



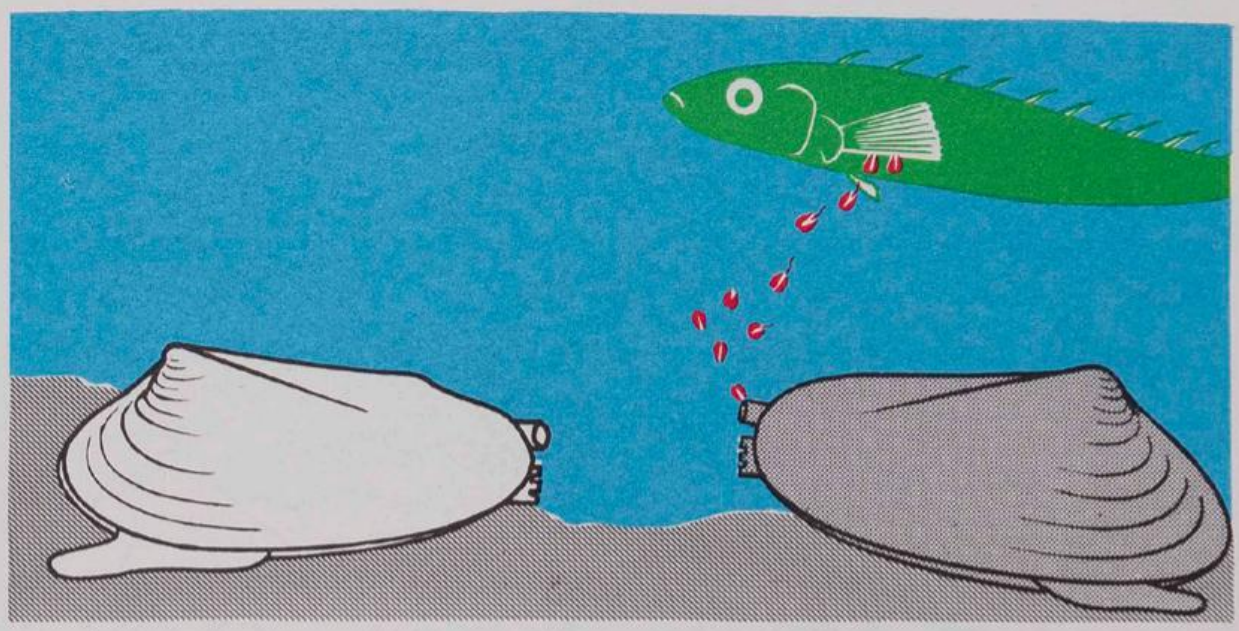




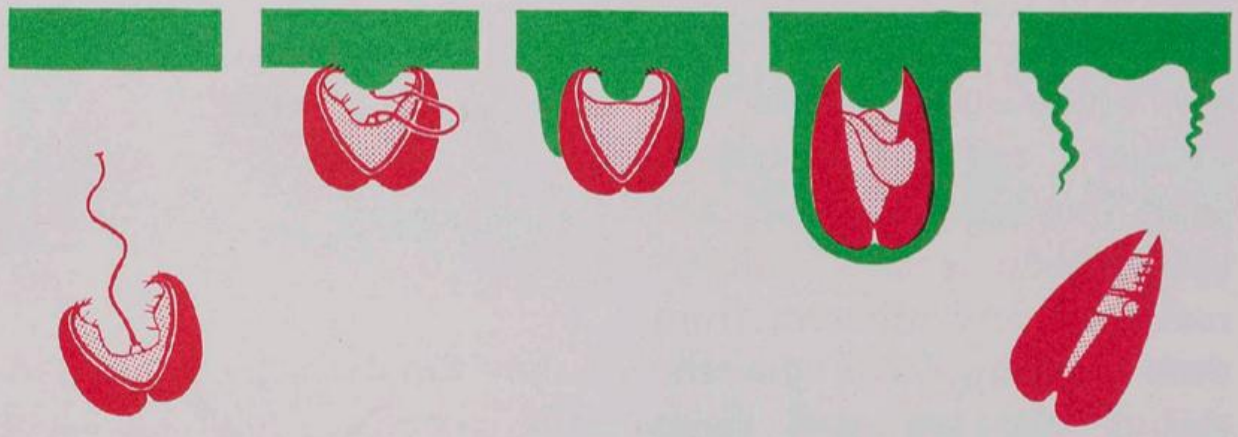




This squid lives in the sea, and on meeting enemies can change colour or squirt ink and shoot backwards at enormous speeds. Sperms have entered the eggs before they are laid in bunches on the rocks. Each egg is transparent and full of yolk (shown green); slowly a perfect little squid (red) forms inside it, having lived all the time on the yolk. It breaks out of the egg cover, looking just like its parents.

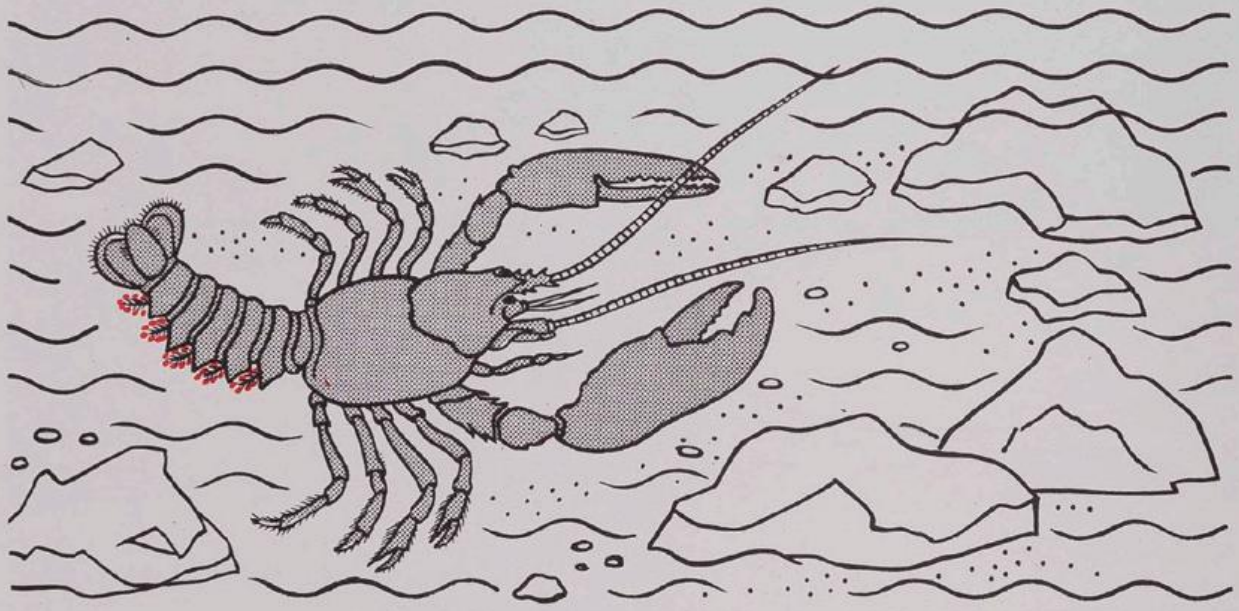


Sperms of a clam enter the gills of a female where her eggs grow. Mother clam drives her children out young.

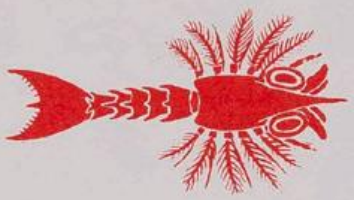


The young clam has no yolk and would have died, but its sticky thread has caught on to a fish which it grips with little hooks. It roots itself into his flesh to feed on him. When it has a foot and muscles, the clam breaks away.

Parents that Crawl with Young that Swim

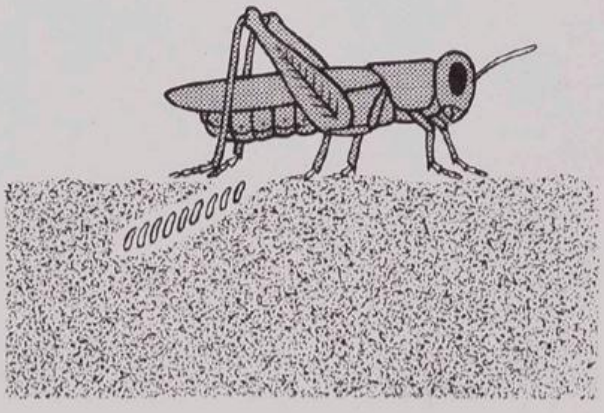


The lobster's growing eggs are stuck underneath the mother's tail for nearly a year. The big-eyed young, no longer than a small fingernail, and very different from their parents, rise to the top of the sea and swim about for six months. Then they slowly change, sink to the bottom and crawl like their parents.





A Family Likeness Right from the Start

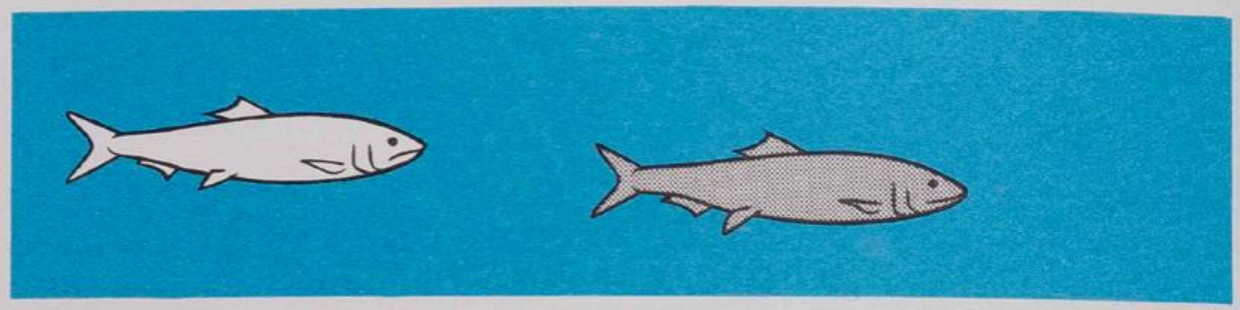


This insect is a grasshopper. Grasshoppers lay their eggs, which are full of yolk, in holes in the ground.

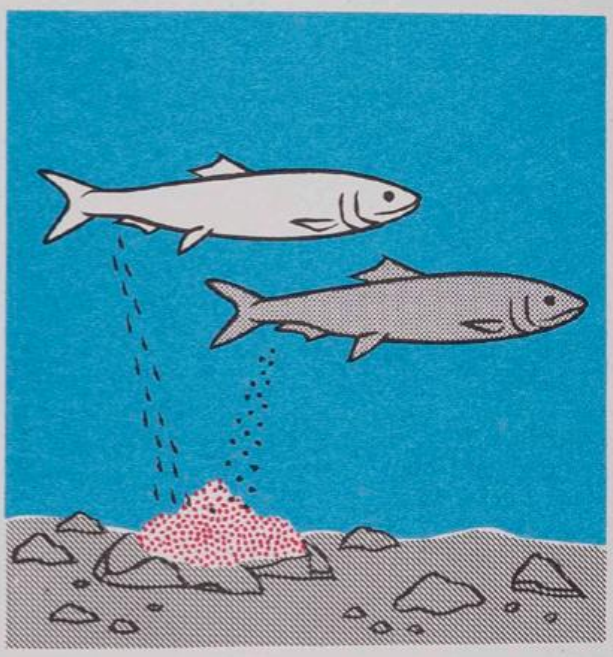


As soon as it hatches out, the little grasshopper or locust looks like its parents, although it has no wings, and it feeds on green plants right away. It grows very fast. The hard skin cannot stretch, so it has to be shed five times, and a new skin has to be grown every time. Then the grasshopper becomes an adult with wings.

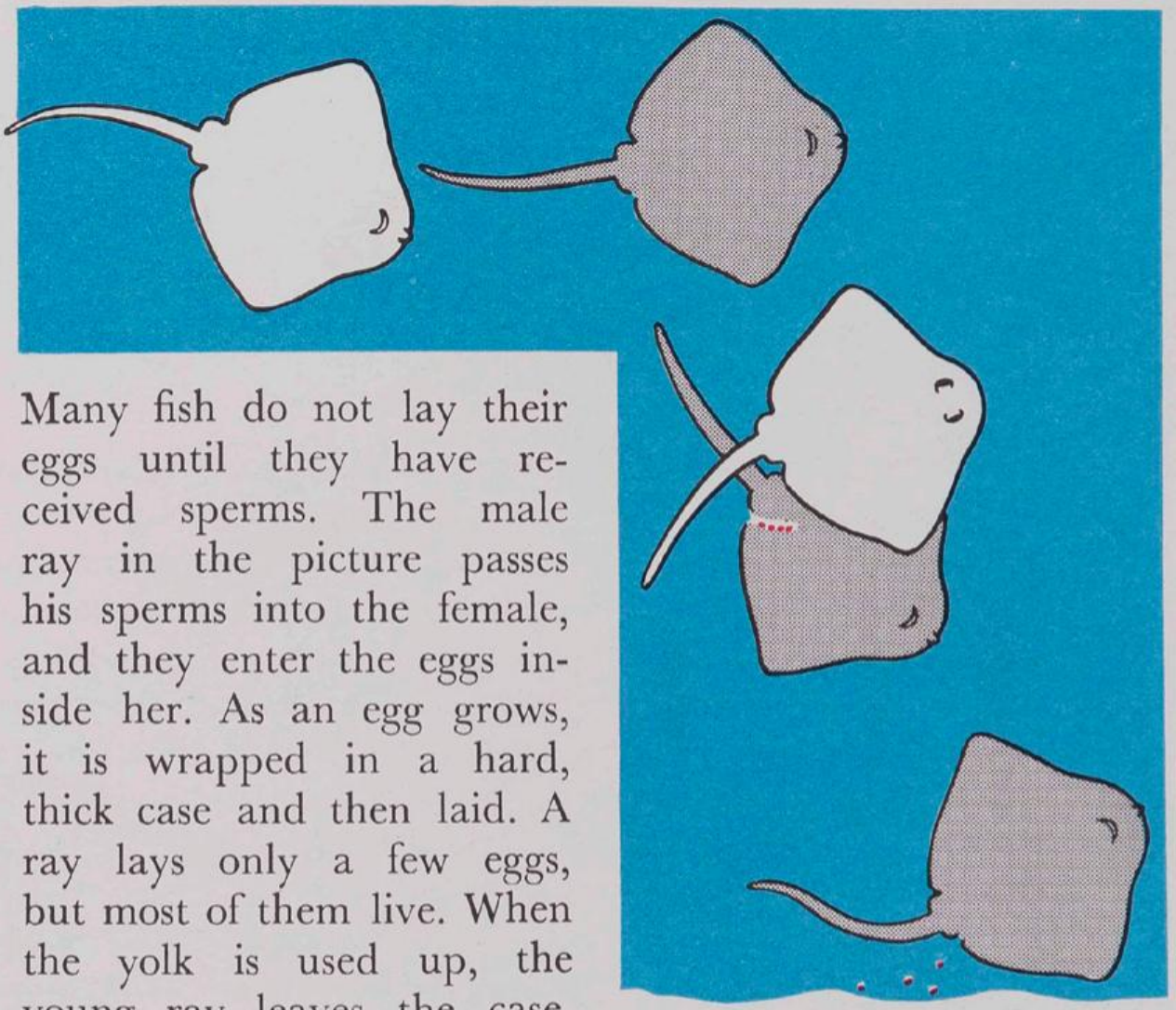
Forty Thousand Eggs, or Just A Few



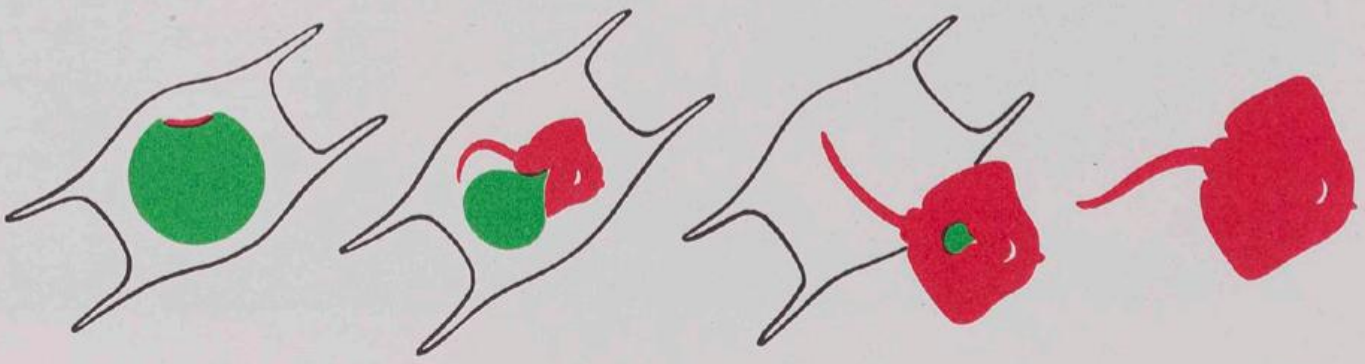
The female herring (shown darker) is laying her eggs which stick to the sea bed. The male herring is shedding sperms over them. Of the 40,000 eggs laid in a year, only one or two grow up; most of them are eaten. A baby fish grows on the yolk inside the egg. When it hatches, it drifts with the tides, finishing off the yolk, then it swims in search of food.



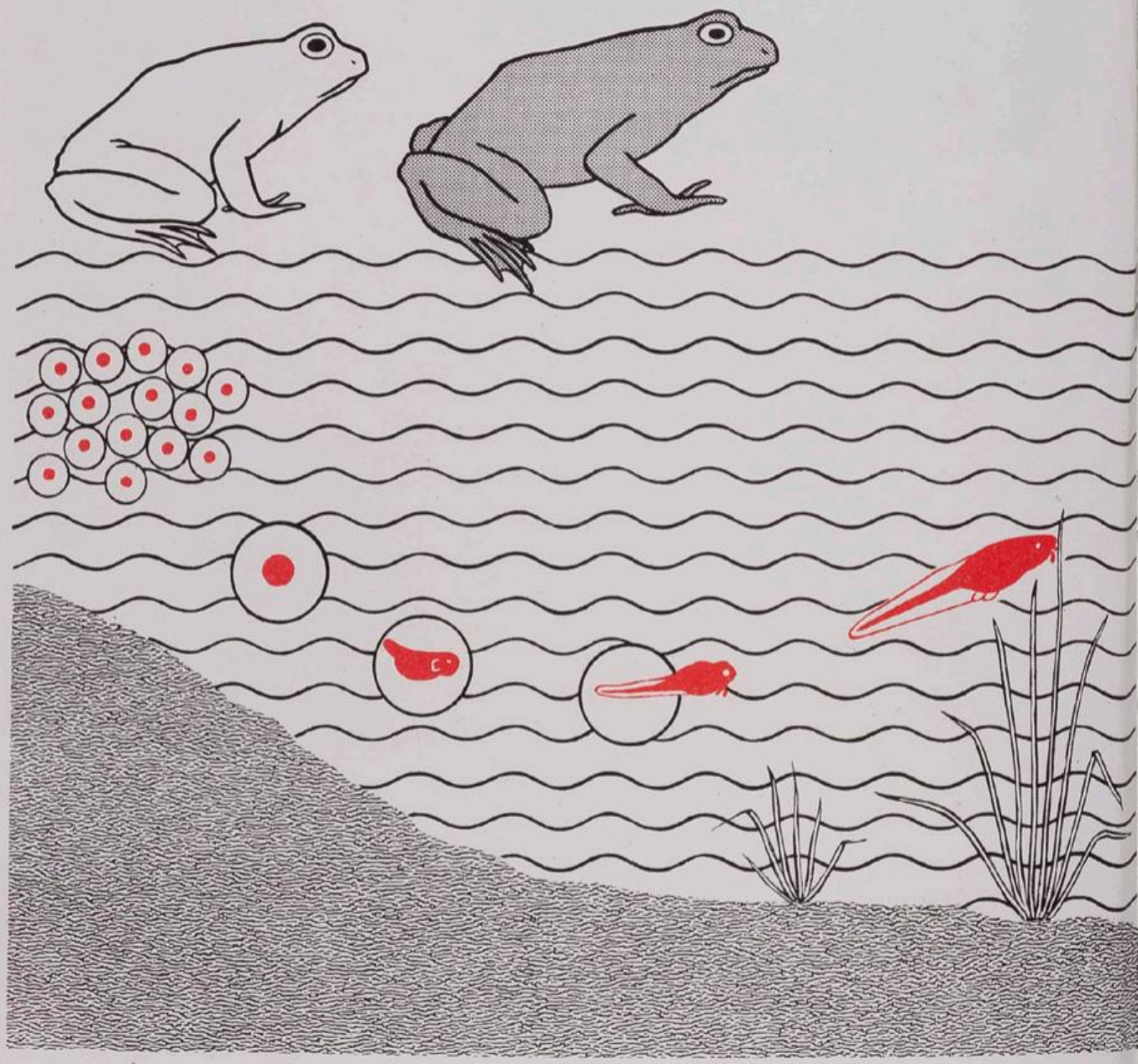




Many fish do not lay their eggs until they have received sperms. The male ray in the picture passes his sperms into the female, and they enter the eggs inside her. As an egg grows, it is wrapped in a hard, thick case and then laid. A ray lays only a few eggs, but most of them live. When the yolk is used up, the young ray leaves the case.



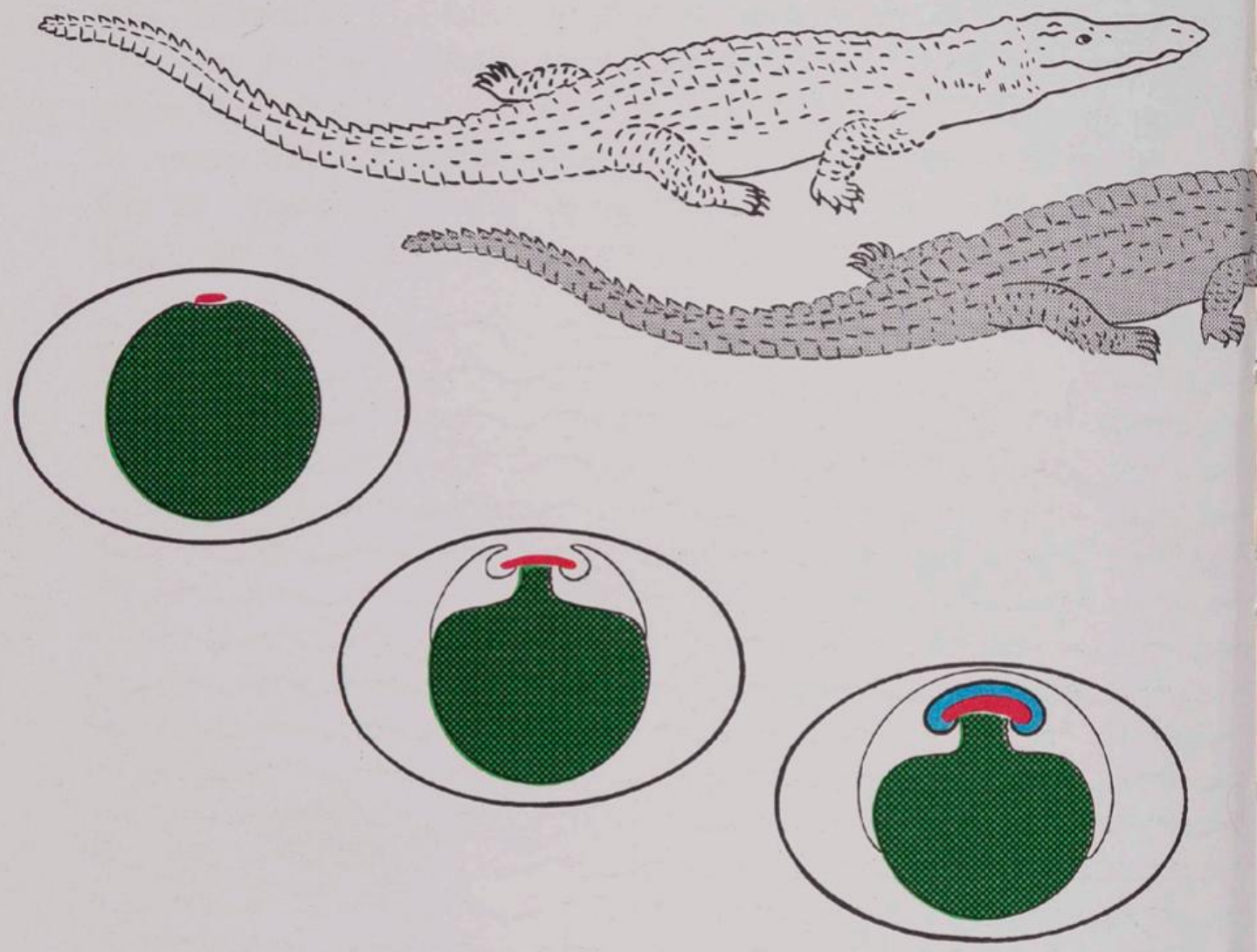
From Life in Water to Life on Land



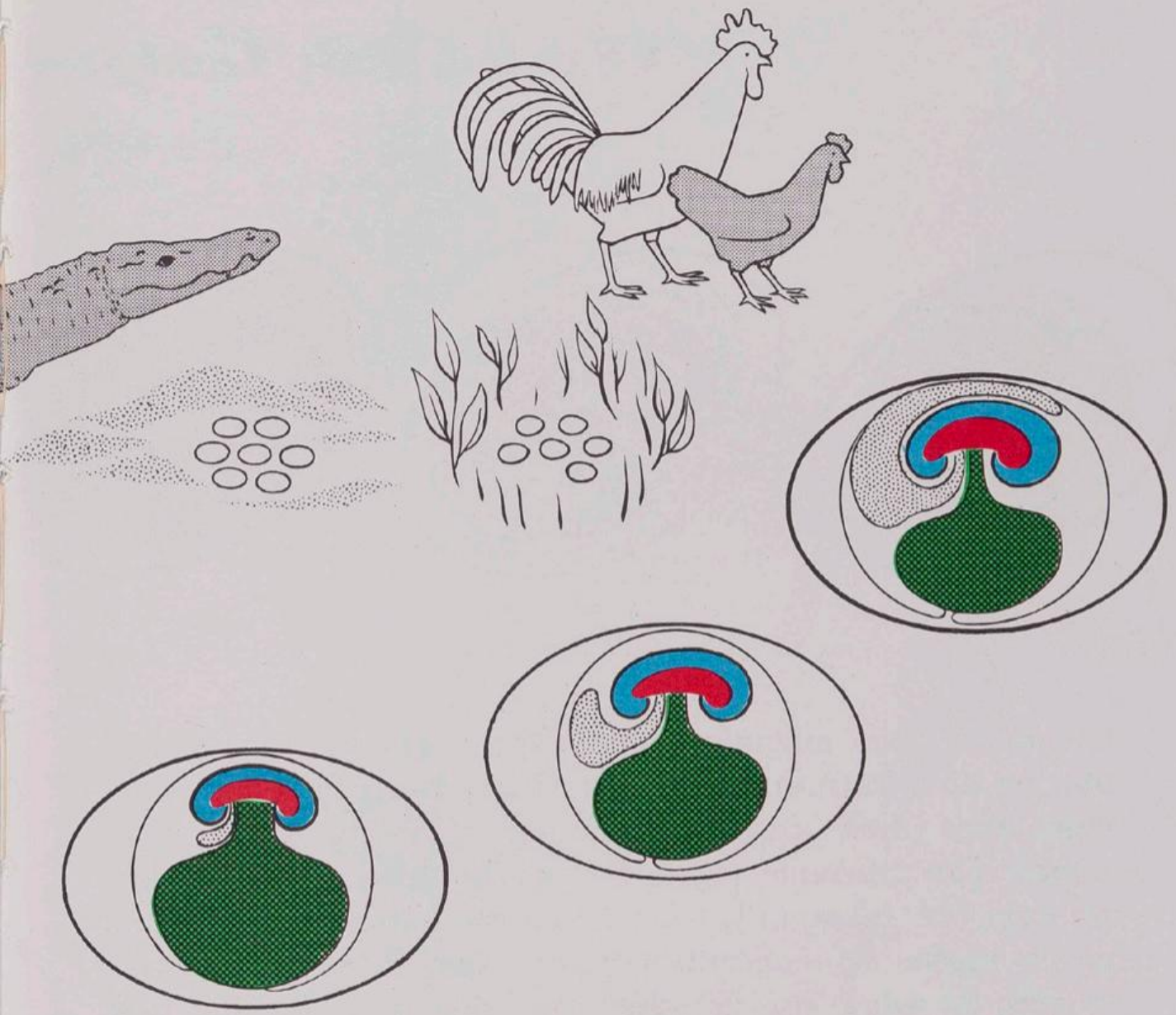
In spring, when the female frog has laid her eggs in the pond and the male has shed his sperms over them, the egg starts to grow into a tadpole with a cushion of jelly round it. After two weeks, the tadpole hatches out and grows gills like a fish. After six weeks, its back legs begin to grow, and later its front legs. First a plant-eater, it now catches insects. Lungs grow inside its body, its tail shrinks. It becomes a tiny frog which can live on land.



The "Pond" Within the Shell of an Egg

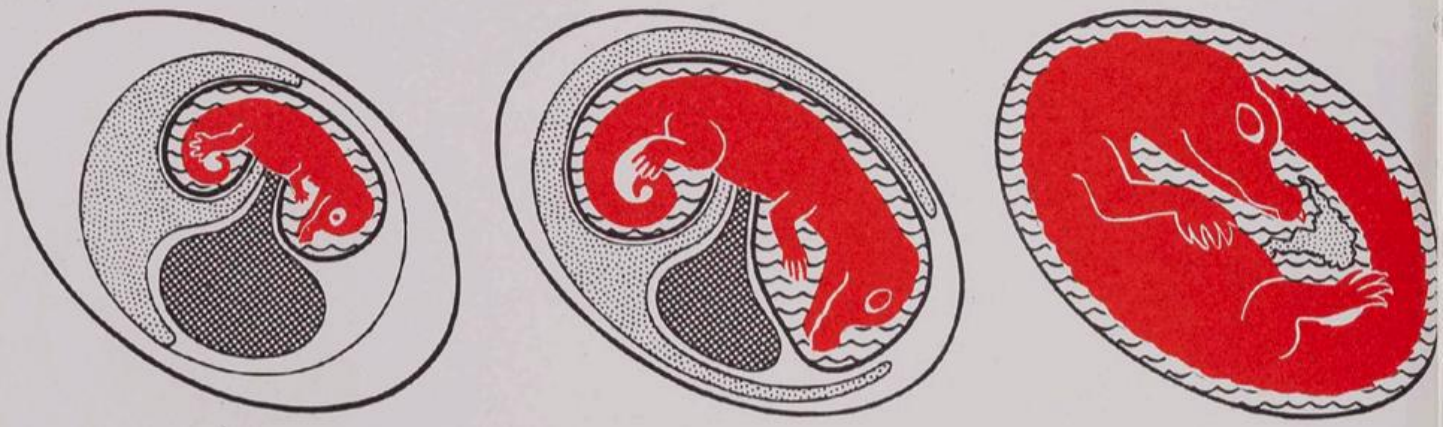


Reptiles can lay their eggs away from water, so can birds. The egg has a hard shell and cannot dry up. There is the watery white of the egg. Later a water-cushion (blue) is made. So the animal (red) grows in its own little "pond".



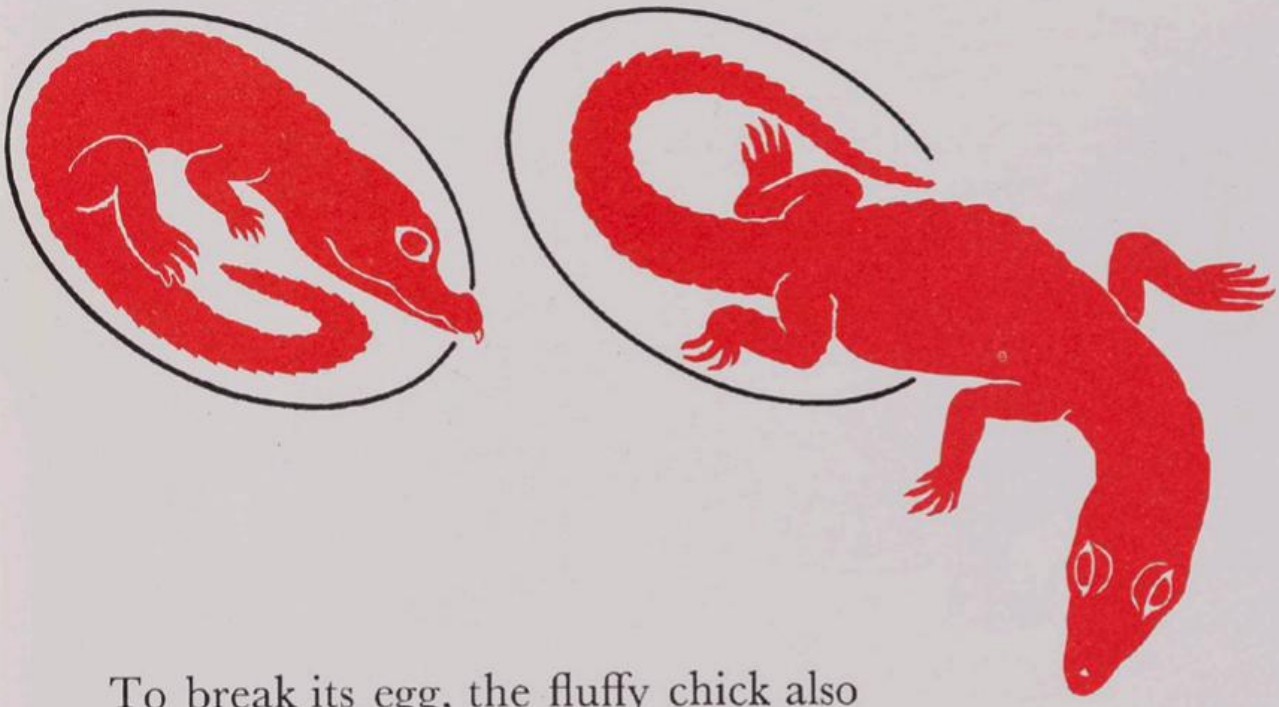
Air is taken in through tiny holes in the shell. As the animal gets bigger it needs more air: a pocket (black dots) develops which acts like a lung. These big eggs hold all the yolk which the little animal needs for food (green).

A Savage, Scaly Youngster

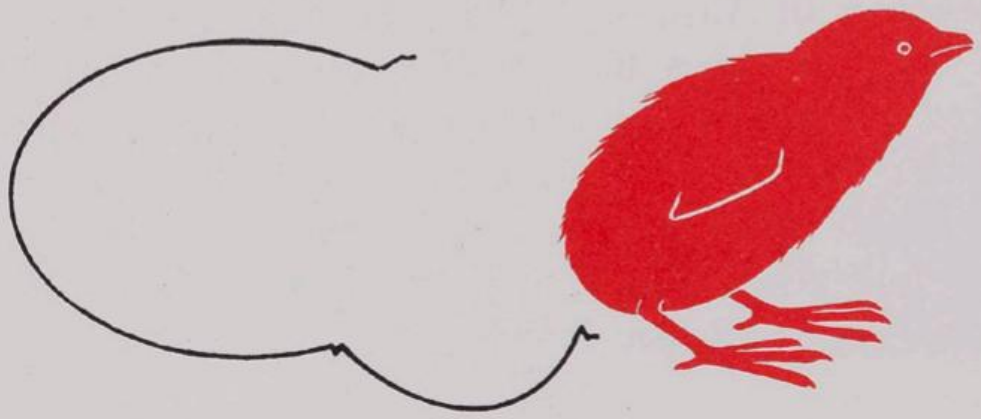


Crocodiles and alligators leave their eggs to be hatched out by the warmth of the sun; but birds like the hen, look after their eggs and sit on them to keep them warm. The crocodile grows for nearly three months inside its egg, but takes only two hours to hatch out. First of all, it pushes its snout through the skin in the egg. Then it gets to work on the shell, twisting and turning and pressing so as to make its special baby-tooth bore through one end of the egg like a gimlet. This savage, scaly youngster then pushes its way out of its watery home and is ready to seek food for itself.

Breaks Through a Hard Shell



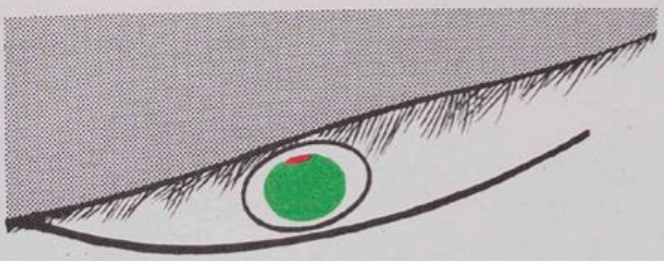
To break its egg, the fluffy chick also uses a baby-tooth and then sheds it.

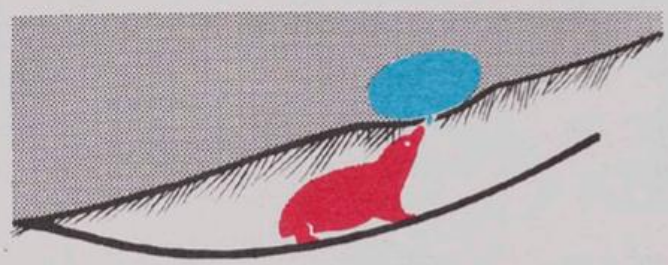


A Special Pocket as a Portable Nest

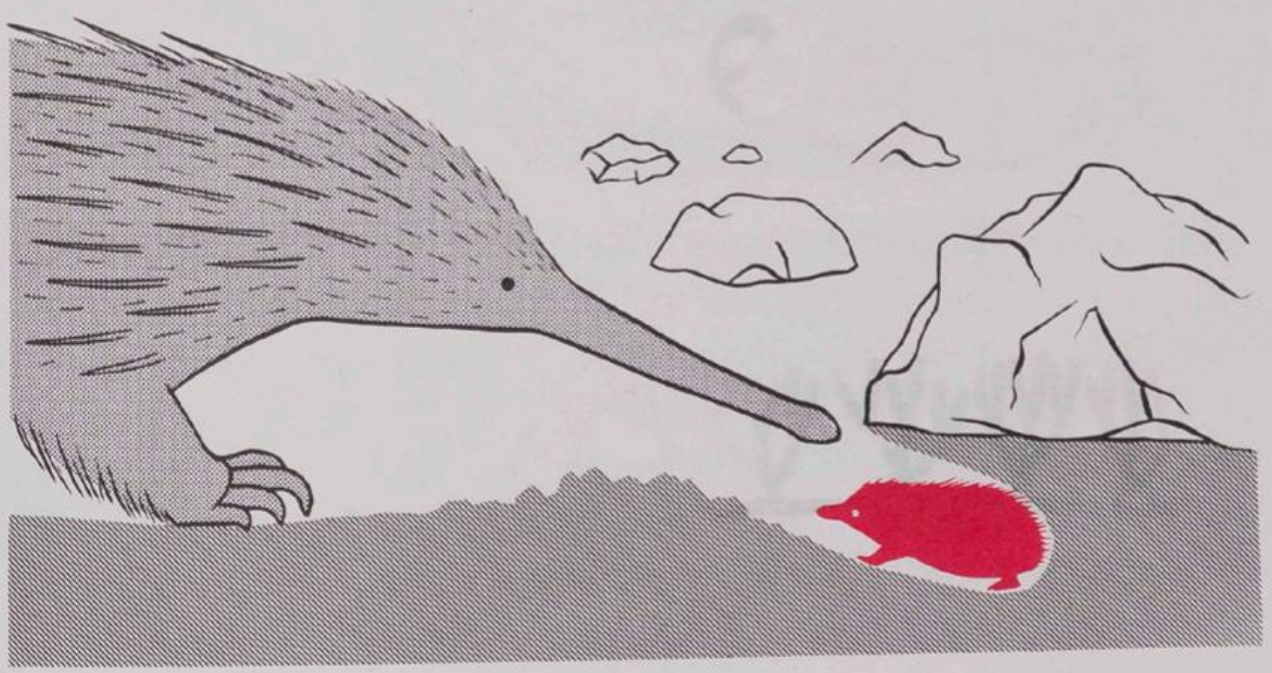


In the picture you can see spiny anteaters. Like the kangaroo they live in Australia. They are a special sort of mammal as they lay eggs like reptiles do and probably as all the first mammals did many millions of years ago. Mother anteater curls herself up and by wriggling about, lays her egg inside a special pocket in her skin. Mother anteater does not always have such a pocket; she grows one every year especially for her egg.

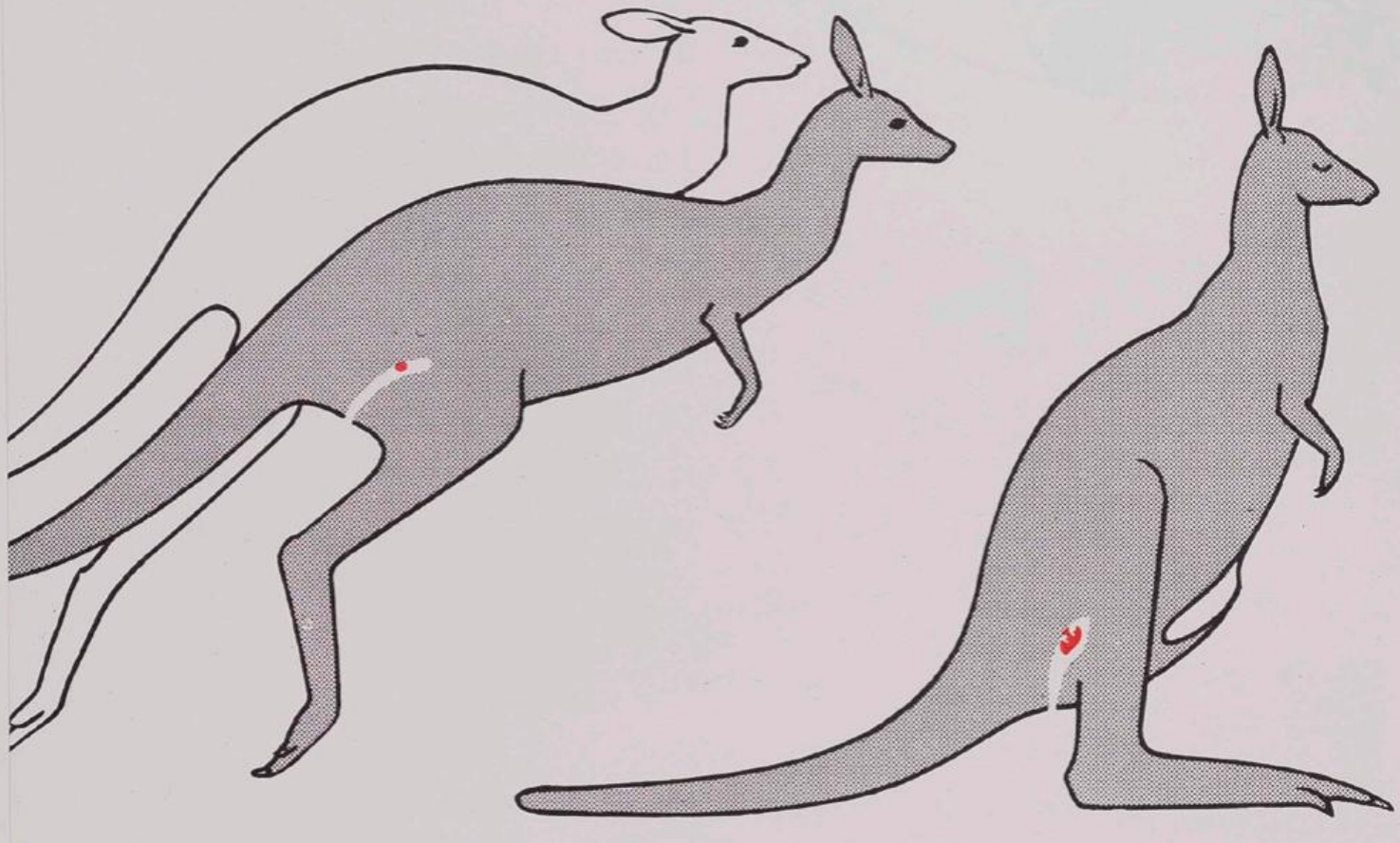




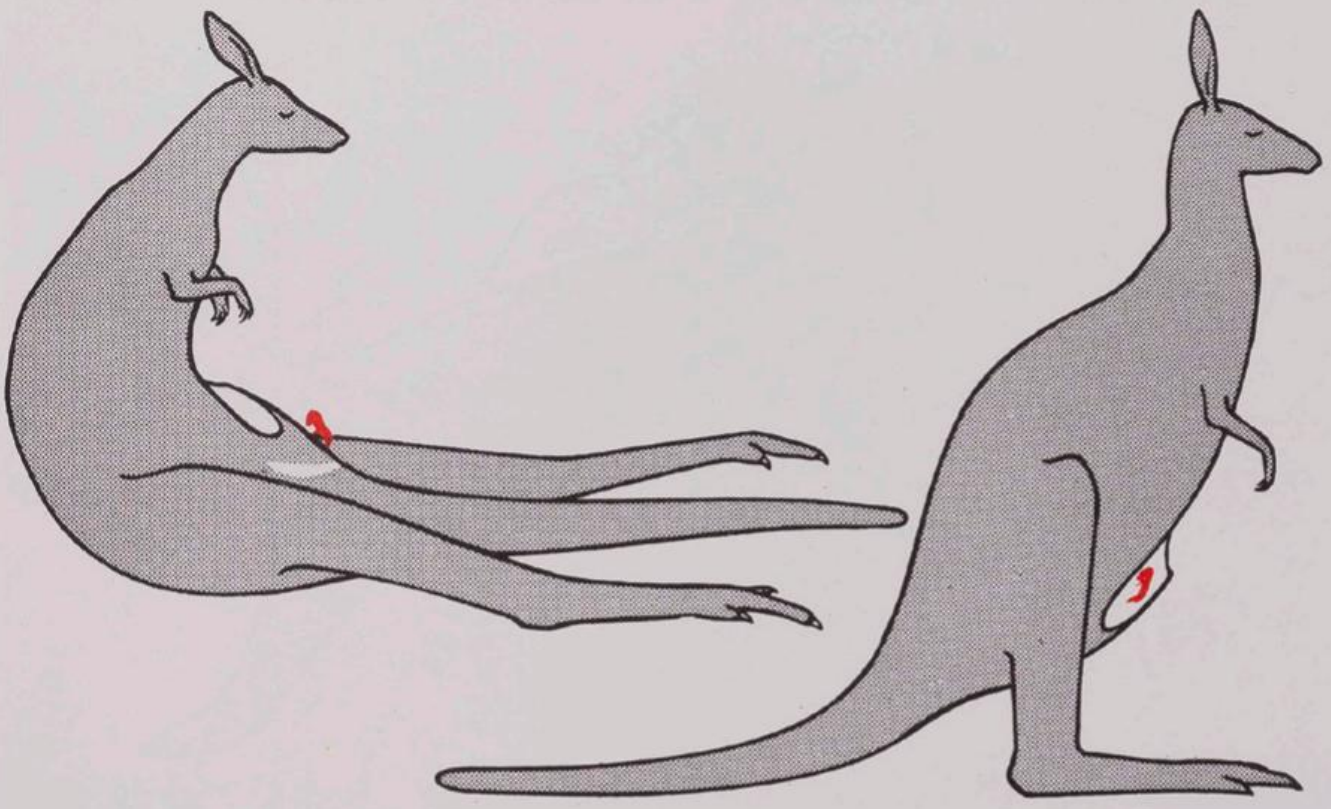
The egg is kept warm until a curious, naked little creature hatches out. It is also carried about, feeding on mother's milk. In a few weeks its prickly spines begin to grow and when they get too uncomfortable for its mother, she takes the little one out of the pocket and hides it away in a hole. She still feeds it with her milk for some time to come.



The Kangaroo No Bigger than Your Finger



The female kangaroo does not lay her egg. It grows inside her body in a special tube for a month or so. When the little kangaroo is born, the mother lies down to let it fall on her tail. It is then smaller than your little finger. It pulls itself up through its mother's fur into the cosy pouch, where it feeds on its mother's milk and grows a fur coat. After nine months, feeding and riding about, out it hops and starts to look after itself.

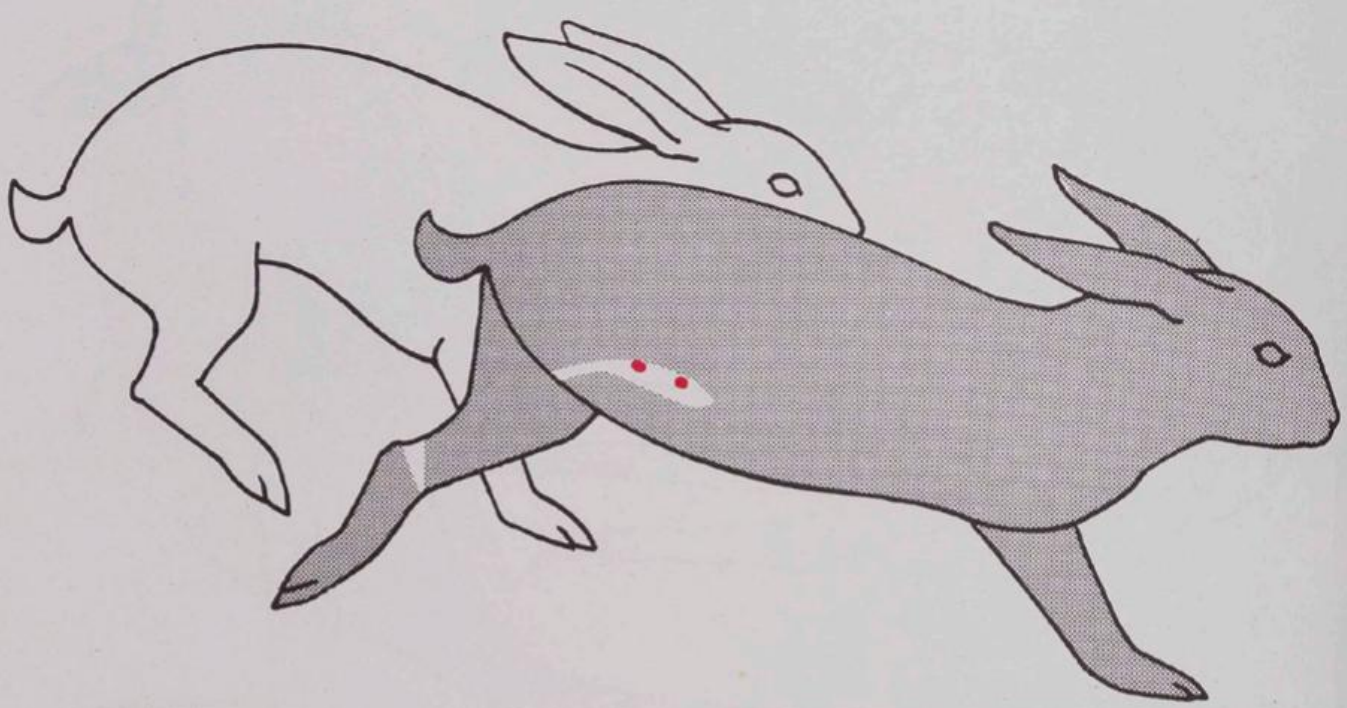


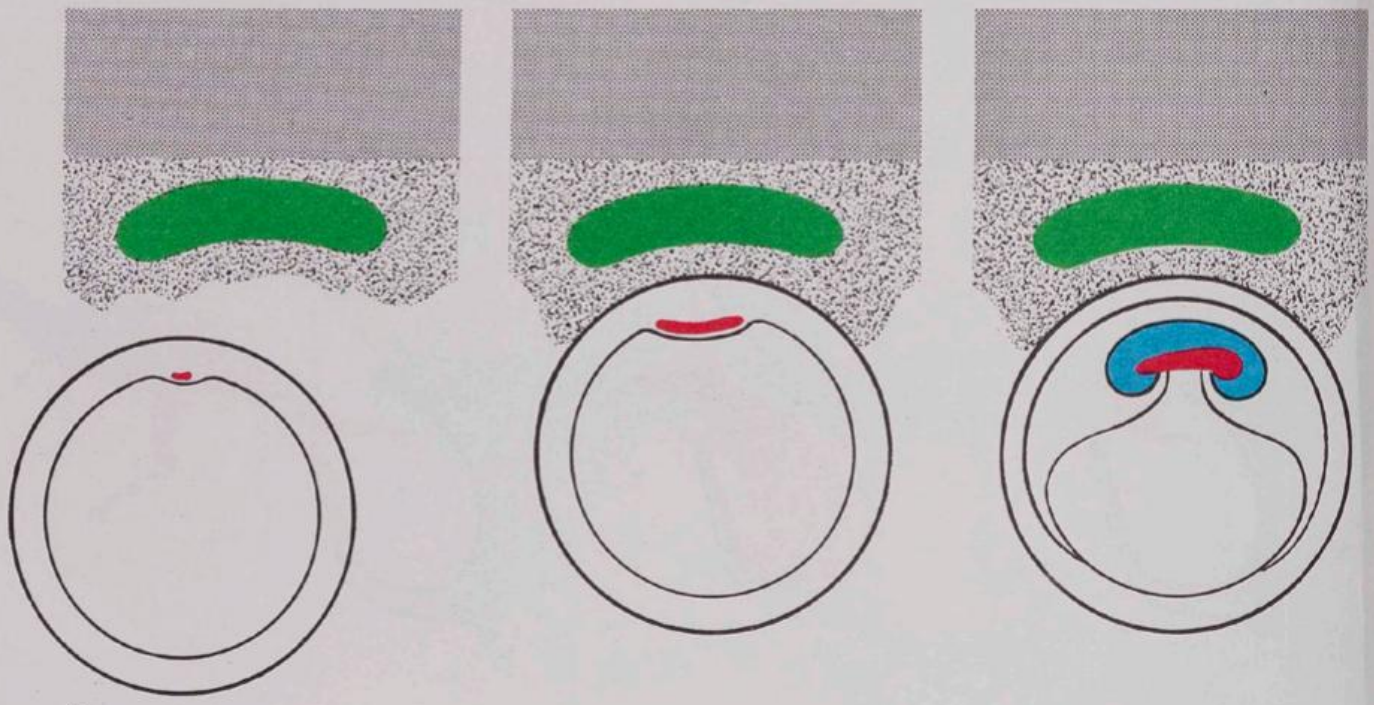




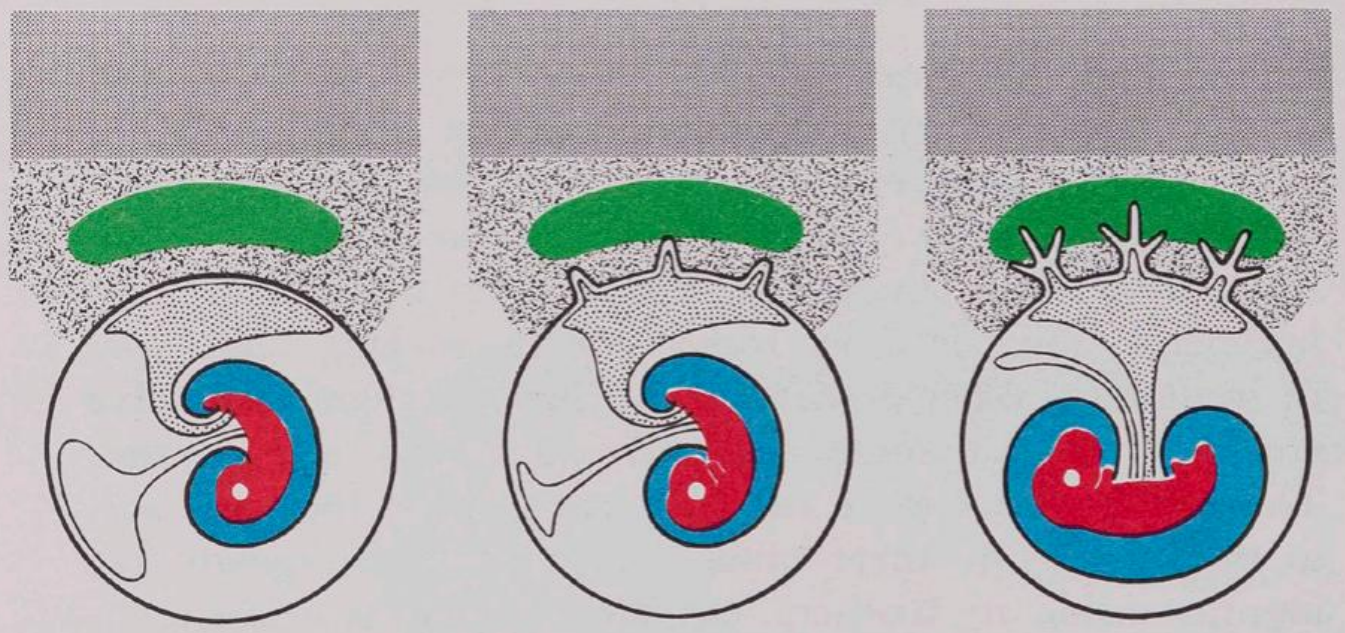


An Unborn Rabbit Feeds and Grows

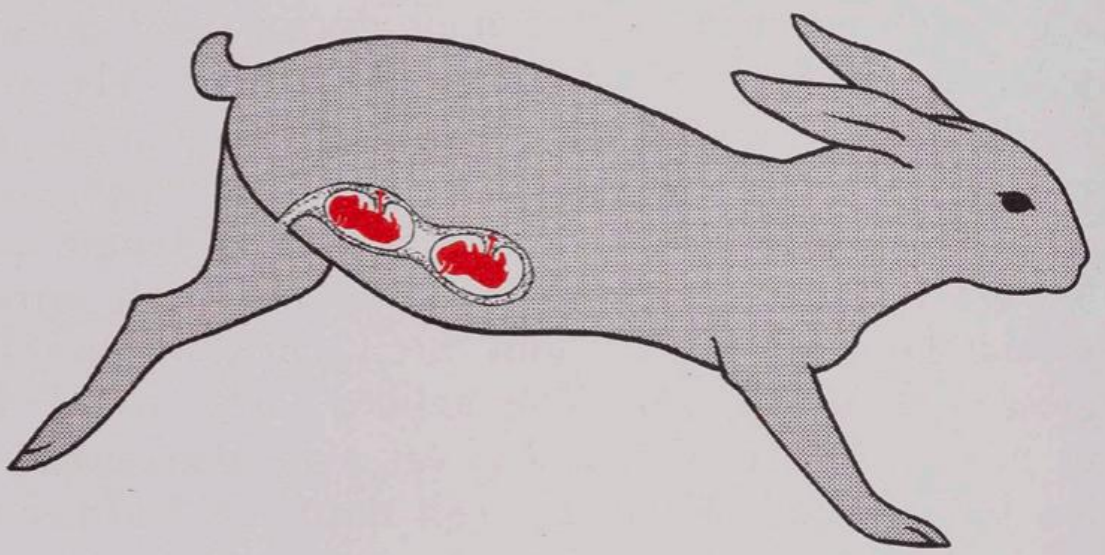




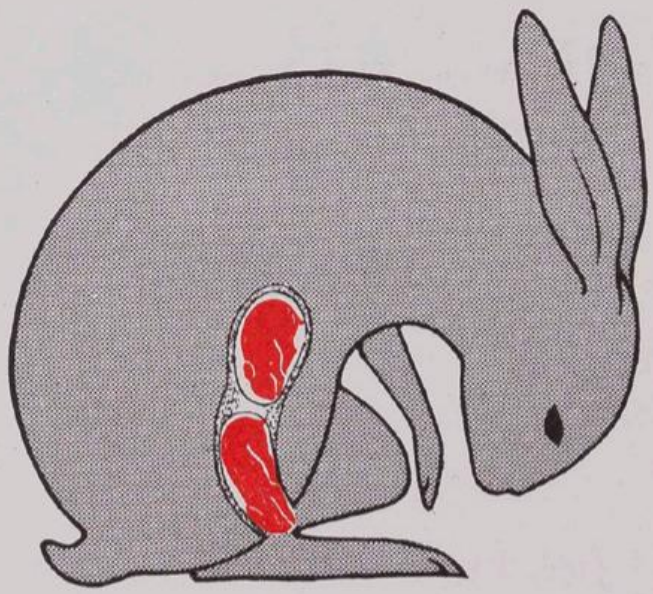
In mammals like ourselves, or cats or dogs or rabbits, the egg is not laid, but is kept inside a special tube. A male mammal puts his sperm into this tube. When an egg has been joined by a sperm, it begins to grow. The egg needs no shell as it cannot dry up, and it needs no yolk, as all food comes from the mother. The yolk-bag in the picture is quite empty (no green). But the unborn rabbit still has its "pond" (blue) in which to grow through its tadpole stage, just as with a reptile or bird. To get its food, it fixes itself to its mother by growing a special kind of "root" into her, somewhat like a plant growing into the soil. The unborn rabbit is fed through its "root". The mother has to eat more than usual, as she has to pass food (green) through the "roots" to her young.

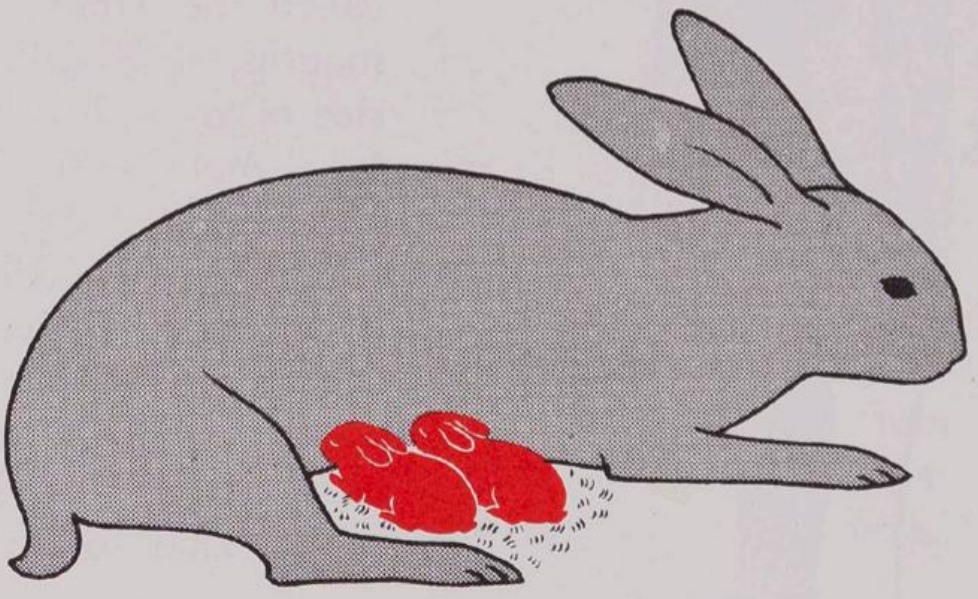


A Fur-lined Nest for a New-born Family



Rabbits grow for one month before they are born, and when they are born, they are not yet complete: they have no fur, their eyes are shut, and they are too weak to stand up. Their mother has to make a cosy nest for them, which she lines with the fur she has pulled from her body. They feed for some time by sucking milk from their mother. Whereas rabbits can have as many as twelve young at a time, some mammals have only one or two. This makes much more room for each inside their mother; so they can grow there much longer. A lamb spends five months inside its mother, and an elephant two years.

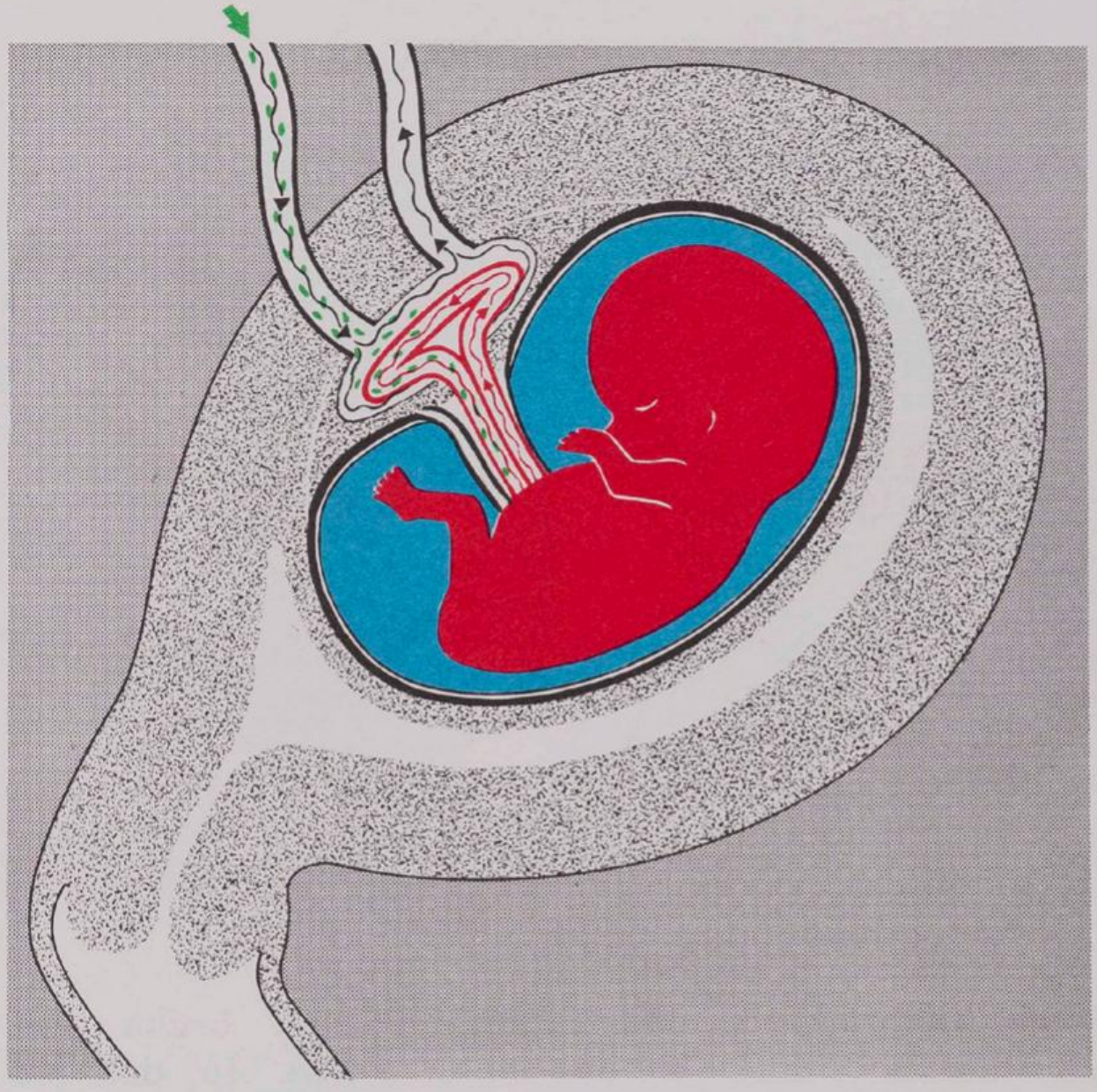






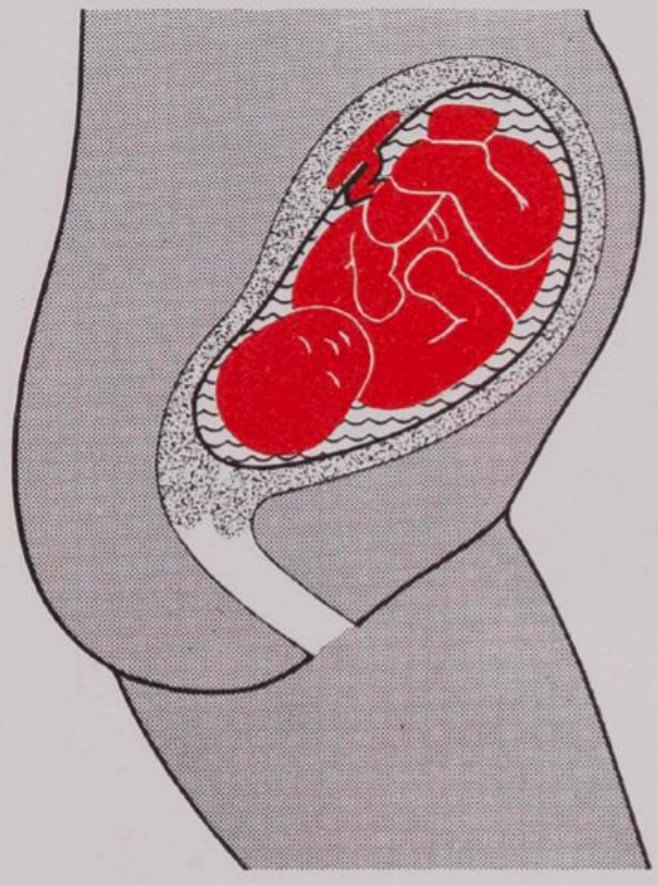
How a Baby Lives Before It is Born

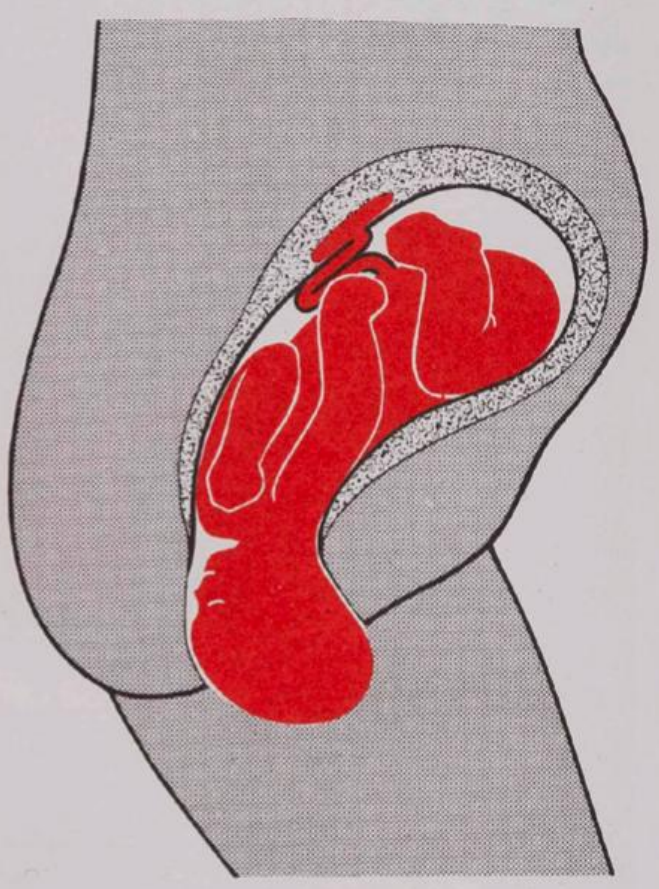
Just like a rabbit, a human being starts life as an egg which has been joined by a sperm. The baby grows inside its mother in a bag called the womb. After two months, it is still only the size of your little finger. At four months it begins to look like a baby, but it is still very small. All the time it is well protected and warm, surrounded by the water cushion. It is fed from its mother's body; her blood carries food to her womb.



A "root" grows into a lining, made specially for it in the mother's womb. Food and air pass through from mother to baby. The womb stretches as the baby gets bigger. After nine months, the baby is ready to be born.

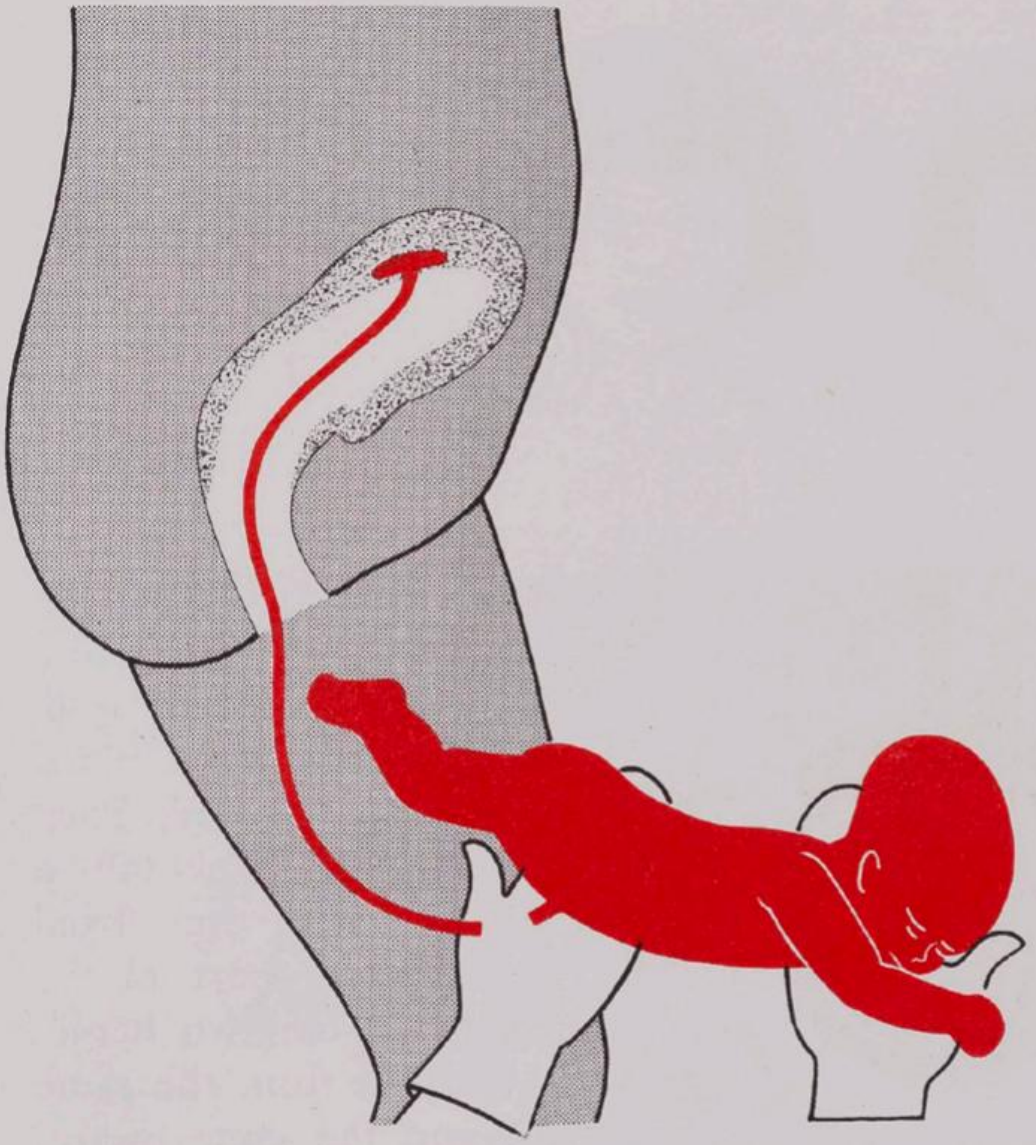
A Baby Comes into the World





When the baby is about six months old it is so much bigger that everyone can see it is there. Also, mother can feel it moving inside her. By now, baby has turned upside down.

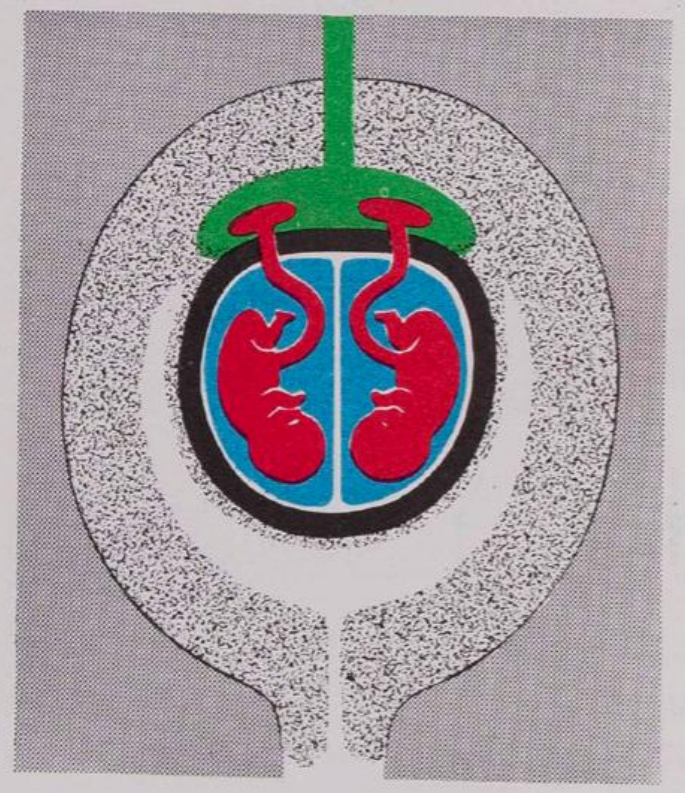
Birth usually begins after nine months. In this picture, the baby is being born. The muscles of the mother's womb shorten and shorten, and help to push baby out and its "pond" runs away.



The doctor or nurse will cut off the root by which the baby was planted in its mother, and the baby begins to breathe in air. A new baby has come into the world.

When Two Babies are Born Together

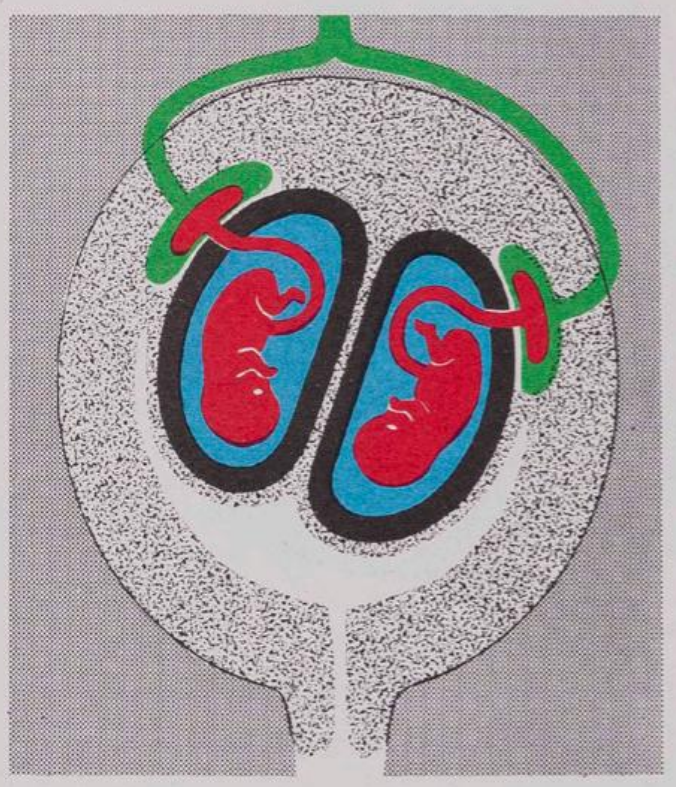




When an egg is ready to grow, it may split into two halves which pull apart, as does the animal in the first picture. Each of these will grow into a baby. They are fixed to the same part of the womb. As the two babies have come from the same egg and the same sperm, they will look so like one another that it will be difficult to tell them apart.

Twins are Not Always Very Much Alike





Sometimes two (or even three) eggs are joined by sperms at the same time, and these eggs will begin to grow side by side. If there are two, twins will be born (if three, triplets). For each baby there will be its own special lining. Since they come from different eggs and different sperms, such twins will not look more alike than other brothers and sisters.

Baby Feeds in Mother's Arms



Baby must now feed on milk from its mother's breast. Then, little by little, it is taught to eat ordinary food.

ld

re

\go

s

ıls

ıth

s. net
d. net

The Wonder World of Nature

The Wonder World of
Earth and Sky

The Wonder World of
Animal Travellers

The Wonder World of
Land and Water

The Wonder World of
Strange Plants

The Wonder World of
the Deep Sea

The Wonder World of Long Ago

The Wonder World of
the Seashore

The Wonder World of Birds

The Wonder World of Insects

The Wonder World of Animals

The Wonder World of
Trees and Flowers

by Marie Neurath

Board editions 7s. net
Library editions in full cloth 8s. 6d. net