

# NATURE'S SECRET WORLD

THE HIDDEN MYSTERIES OF  
PLANTS & ANIMALS





# CONTENTS

---

## STRATEGIES FOR SURVIVAL

ALL CREATURES GREAT AND DIFFERENT  
*Genetics and diversity in the animal kingdom*

6

NATURE GOES TO TOWN  
*Adapting to an urban environment*

12

DEAD OR ALIVE?  
*Grass snakes play dead to survive*

16

SEA SERPENTS  
*Supreme at sea — helpless on land*

17

THE ULTIMATE SURVIVOR  
*Horseshoe crabs*

21

ALL PUFFED UP  
*How pufferfish deter predators*

24

MASTERS OF DECEPTION  
*Exotic orchids under threat*

25

THE ROTTEN WORLD OF FUNGI  
*Parasites with a purpose*

31

THE TARDIGRADE  
*Nature's toughest bug*

36

THINGS THAT GO CRUNCH IN THE NIGHT  
*Indestructible cockroaches*

38

POCKETS OF SURVIVAL  
*How marsupials live*

43

EYE SPY  
*Butterfly — designs for living*

47

---

## ADAPTING TO THE ENVIRONMENT

THE BIG SLEEP  
*The mystery of hibernation*

51

GOING TO EXTREMES  
*The planet's hottest, coldest weather*

54

BETWEEN THE TIDES  
*Shore crabs' tidal habitat*

56

EVOLUTION IN ISOLATION  
*Animals on remote islands*

58

DEATH ON THE REEF  
*Starfish settle on the Barrier Reef*

60

TROPICAL HIDEAWAY  
*Vulnerable sea creatures conceal themselves*

62

MASTERMIND OF THE SEA  
*Octopus of the oceans*

64

---

## SPECIALISED STRUCTURES

THE FLYING START  
*How the wing evolved*

38

EASY FLYERS  
*How birds use their wings*

43

DEATH IN THE DARK  
*The owl's lethal night vision*

47

FINS AIN'T WHAT THEY USED TO BE  
*How fins evolved into feet*

GROW YOUR OWN  
*Animals that can regrow limbs*

BANG GOES THE BEETLE  
*Bombardier beetles speciality*

LITTLE ROTIFERS  
*'Wheel animals'*

THE BENIGN PRISON  
*Inside a bird's egg*

HOW WOODPECKERS PACK A PUNCH  
*Built-in shock absorbers*

95 DEATH IN THE AFTERNOON 137  
*The deadly dragonfly in action*

97 WON'T YOU STEP INTO MY PARLOUR? 140  
*Spider's silk — stronger than steel*

100 THE KISS OF DEATH 146  
*Deadly love life of insects*

104 SAVE THE SIRENIANS 150  
*Sea cows' secret life*

EGGS WITHOUT NESTS 155  
*Terns' idea of home*

ALL OF A TWITTER 156  
*How birds make music*

---

## SEXUAL AND SOCIAL BEHAVIOUR

---

THE SEXUAL TRAP 107  
*Males battle for mates*

WHEN THE CUCKOO COMES CALLING 110  
*Laying eggs in other birds' nests*

WHAT IS THE POINT OF SEX 113  
*Asexual reproduction*

DINNER WITH THE FAMILY 116  
*Animal cannibalism*

WHEN FATHER IS MOTHER 119  
*Role reversal in rearing young*

THERE'S NO PLACE LIKE HOME 122  
*Animal architecture*

THE LITTLE HOUSES ON THE PRAIRIE 128  
*Communal living among animals*

THE DAM BUILDERS 132  
*The beavers' construction techniques*

---

## WORKING WITH NATURE

---

THE RESOURCE-FULL OCEAN 161  
*New harvests for man*

113 THE TIGER RETURNS WITH A VENGEANCE 164  
*Conserving an endangered species*

116 THE PROBLEM WITH PANDAS 166  
*Refuge for the rarest animal*

119 NEW WAYS TO STOP A SHARK 170  
*Using nature's way*

122 WOLF WHISTLES 172  
*Man and sheepdog in perfect harmony*

128 THEY SPY WITH A CAMERA'S EYE 176  
*Searching nature's hidden secrets*

INDEX 184