



ALL RIGHTS RESERVED © جميع حقوق الطبع محفوظة

No part of this book may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and recording or by any information storage and retrieval system, without the written permission of the publisher.

First Edition: 2010

Supervised by:

**Abdul Malik Mujahid**

**HEAD OFFICE**

P.O. Box: 22743, Riyadh 11416 K.S.A. Tel: 00966-1-4033962/4043432 Fax: 4021659  
E-mail: darussalam@awalnet.net.sa, riyyadh@dar-us-salam.com Website: www.darussalamksa.com

**K.S.A. Darussalam Showrooms:**

**Riyadh**

**Olaya branch:** Tel: 00966-1-4614483 Fax: 4644945  
**Malaz branch:** Tel: 00966-1-4735220 Fax: 4735221  
**Suwaydi branch:** Tel: 00966 1 4286641  
**Suwayl branch:** Tel & Fax: 1-2860422

**Jeddah**

Tel: 00966-2-6879254 Fax: 6336270

**Madinah**

Tel: 00966-04-8234446, 8230038  
Fax: 04-8151121

**Al-Khobar**

Tel: 00966-3-8692900 Fax: 8691551

**Khamis Mushayt**

Tel & Fax: 00966-072207055

**Yanbu Al-Bahr** Tel: 0500887341 Fax: 04-3908027

**Al-Buraida** Tel: 0503417156 Fax: 06-3696124

**U.A.E**

**Darussalam, Sharjah U.A.E**

Tel: 00971-6-5632623 Fax: 5632624  
Sharjah@dar-us-salam.com.

**PAKISTAN**

**Darussalam, 36 B Lower Mall, Lahore**

Tel: 0092-42-724 0024 Fax: 7354072

**Rahman Market, Ghazni Street, Urdu Bazar Lahore**

Tel: 0092-42-7120054 Fax: 7320703

**Karachi**, Tel: 0092-21-4393936 Fax: 4393937

**Islamabad**, Tel: 0092-51-2500237 Fax: 512281513

**U.S.A**

**Darussalam, Houston**

P.O. Box: 79194 Tx 77279  
Tel: 001-713-722 0419 Fax: 001-713-722 0431  
E-mail: houston@dar-us-salam.com

**Darussalam, New York** 486 Atlantic Ave, Brooklyn

New York-11217, Tel: 001-718-625 5925  
Fax: 718-625 1511  
E-mail: darussalamny@hotmail.com

**U.K**

**Darussalam International Publications Ltd.**

Leyton Business Centre  
Unit-17, Etloe Road, Leyton, London, E10 7BT  
Tel: 0044 20 8539 4885 Fax: 0044 20 8539 4889  
Website: www.darussalam.com  
Email: info@darussalam.com

**Darussalam International Publications Limited**

Regents Park Mosque, 146 Park Road  
London NW8 7RG Tel: 0044- 207 725 2246  
Fax: 0044 20 8539 4889

**AUSTRALIA**

**Darussalam**: 153, Haldon St, Lakemba (Sydney)

NSW 2195, Australia  
Tel: 0061-2-97407188 Fax: 0061-2-97407199  
Mobile: 0061-414580813 Res: 0061-2-97580190  
Email: abumuaaz@hotmail.com

**The Islamic Bookstore**

Ground Floor-165 Haldon Street  
Lakemba, NSW 2195, Australia  
Tel: 0061-2-97584040 Fax: 0061-2-97584030  
Email: info@islamicbookstore.com.au  
Web Site: www.islamicbookstore.com.au

**CANADA**

**Nasiruddin Al-Khattab**

2-3415 Dixie Rd, Unit # 505  
Mississauga  
Ontario L4Y 4J6, Canada  
Tel: 001-416-418 6619

**FRANCE**

**Editions & Librairie Essalam**

135, Bd de Ménilmontant- 75011 Paris  
Tél: 0033-01- 43 38 19 56/ 44 83  
Fax: 0033-01- 43 57 44 31  
E-mail: essalam@essalam.com.

**MALAYSIA**

**Darussalam**

**Int'l Publishing & Distribution SDN BHD**

D-2-12, Setiawangsa 11, Taman Setiawangsa  
54200 Kuala Lumpur  
Tel: 03-42528200 Fax: 03-42529200  
Email: darussalam@streamyx.com  
Website: www.darussalam.com.my

**SRI LANKA**

**Darul Kitab 6**, Nimal Road, Colombo-4  
Tel: 0094 115 358712 Fax: 115-358713

**INDIA**

**Islamic Books International**

54, Tandel Street (North)  
Dongri, Mumbai 4000 09, INDIA  
Tel: 0091-22-2373 4180  
E-mail: ibi@irf.net

**SOUTH AFRICA**

**Islamic Da'wah Movement (IDM)**

48009 Qualbert 4078 Durban, South Africa  
Tel: 0027-31-304-6883 Fax: 0027-31-305-1292  
E-mail: idm@ion.co.za

Scientific Miracles in the

**OCEANS**

*and*

**ANIMALS**

**Yusuf Al-Hajj Ahmad**

Translation

Nasiruddin al-Khattab (Canada)

Edited by:

Huda Khattab (Canada)



**DARUSSALAM**

GLOBAL LEADER IN ISLAMIC BOOKS

Riyadh • Jeddah • Al-Khobar • Sharjah  
Lahore • London • Houston • New York



*In the Name of Allah,  
the Most Gracious, the Most Merciful*

© Maktaba Dar-us-Salam, 2010

King Fahd National Library Cataloging-in-Publication Data

Ahmad, Yusuf Al hajj

Scientific Miracles in the Ocean & Animals. /

Yusuf Al hajj Ahmad - Riyadh , 2010

Pages: 255 Size: 17x24 cm

ISBN: 978-603-500-041-3

1-Islam and Science 2- Ocean - Quranic teaching

I - Title

214.55146 dc 1431/8748

L.D. no. 1431/8748

ISBN: 978-603-500-041-3

## Contents

➤ Author's Note .....	9
➤ Scientific Miracles in the Oceans .....	12
➤ Water and Life .....	14
➤ Composition of Water .....	20
➤ Origin of Water .....	22
➤ Water is of extraterrestrial origin .....	22
➤ Water is of Earthly origin .....	26
➤ The vastness of the Oceans .....	28
➤ The Power of the Sea .....	30
➤ Sea Creatures .....	33
➤ Amoeba .....	35
➤ Sponge .....	36
➤ Fish .....	37
➤ Starfish .....	38
➤ Coral .....	39
➤ Pearl oyster .....	41
➤ The darkness of the Sea and the movement of the Waves .....	42
➤ Verses concerning this miracle .....	42
➤ Linguistic explanation .....	43
➤ Explanations of the Mufasssireen (exegetes) .....	43
➤ Historical introduction .....	43
➤ Scientific facts .....	45
➤ Scientific explanation .....	45
➤ Layers of darkness of the deep sea .....	45
➤ Movement of internal waves .....	47
➤ Scientific references .....	50
➤ The miraculous aspect .....	51



➤ Water barriers.....	53
➤ Linguistic interpretation.....	54
➤ Comments of the Mufasssireen .....	55
➤ A barrier between the freshwater river and the salty sea .....	55
➤ Historical introduction .....	56
➤ Some scientific facts .....	57
➤ Scientific explanation.....	58
➤ Barrier between two salty seas.....	58
➤ Barrier between freshwater river and salty sea.....	60
➤ Water barrier surrounding the estuary region .....	62
➤ The estuary region and the characteristics of the partition .....	63
➤ Scientific references .....	64
➤ The miraculous aspect.....	65
➤ The Sea Set on Fire .....	66
➤ Salinity of the seas .....	73
➤ Ocean waves and coastal erosion.....	77
➤ Explanation .....	78
➤ Scientific Explanation .....	79
➤ And ' We have made from water every living thing' .....	81
➤ Scientific Miracles in the Animals .....	84
➤ Signs of Allah, the Exalted, in the animals .....	86
➤ The digestive tract of animals .....	86
➤ Predators .....	87
➤ Ruminants .....	88
➤ Birds and domesticated fowl.....	90
➤ Bones of animals.....	92
➤ Amazing adaptations.....	94
➤ New Zealand Raven.....	94
➤ Dragonflies .....	95
➤ Frogs .....	96
➤ Octopus .....	97

➤ Fighting fish .....	98
➤ Respiratory system in animals .....	100
➤ Wonders of animals.....	101
➤ The Camel .....	112
➤ Camel's milk .....	123
➤ Homing pigeons, the first news agency in history .....	126
➤ Migration of birds .....	130
➤ Bees – a major sign .....	136
➤ The colony of the ants .....	146
➤ The Spider.....	151
➤ The Beaver – Dam Builder .....	158
➤ The Owl (Tytonidae) and the Arabs' View about it and Hammah.....	161
➤ Butterflies and Moths; Extraordinary Creatures .....	163
➤ Symmetry of wings .....	166
➤ Mosquitoes .....	168
➤ Houseflies.....	174
➤ Nests built for the young.....	176
➤ How birds build their comfortable nests .....	179
➤ The nests stitched by the tailorbird .....	181
➤ The weaver bird .....	182
➤ The nests of the swallow .....	184
➤ Penguins' nests.....	186
➤ Nest of horned birds.....	186
➤ Nest built by different creatures.....	188
➤ The den of the polar bear .....	190
➤ Alligator dens.....	192
➤ The den of the blacksmith frog .....	193
➤ Underwater architects .....	194
➤ How do animals succeed in doing these things?.....	196
➤ The silkworm which operates according to a multi-stage plan.....	197
➤ Animals living in one family .....	200



➤ How the members of a family recognize one another .....	201
➤ Adaptation to the environment.....	204
➤ Amazing care given by living creatures to their eggs and the young ones ..	208
➤ The emperor penguin and his unbelievable patience .....	213
➤ The Seahorse The only species in which the male becomes pregnant.....	215
➤ The grunion fish and a journey fraught with danger .....	216
➤ The nest built by fish from water moss .....	218
➤ The gray whale.....	219
➤ The cichlid and its extraordinary care of its young ones .....	220
➤ The devotion of the ostrich .....	222
➤ The wolf spider carries its young ones in a silken sac .....	223
➤ Care of wild bees for their young ones who will never see them .....	224
➤ Everything for the sake of the young ones.....	226
➤ Insects also protect their young ones .....	231
➤ Feeding the young ones .....	232
➤ Divers or loons and the feathers which they offer as food to their young ones .....	233
➤ The guacharo bird And the long distances it covers to bring food for its young ones .....	235
➤ The bustard that brings water for its young ones to drink .....	237
➤ Insects and how they feed their young ones .....	239
➤ Creatures moving their young ones .....	241
➤ Cooperation and solidarity among living beings .....	244
➤ Living creatures warning one another of approaching danger.....	246
➤ Living beings confronting danger together.....	246
➤ Mutual support and cooperation among the birds of Africa .....	249
➤ Animals cooperating at the time of birth .....	250
➤ Animals nursing the young ones of other animals .....	251
➤ Signs of sacrifice in the ant colony .....	253
➤ Images of sacrifice in the bees' nest.....	254



## Author's Note

All praise is due to Allah. We praise Him and we seek for His assistance and forgiveness. We seek refuge with Him from the evils of our own souls and from our misdeeds. No one can mislead whomever Allah guides and no one can guide whomever Allah causes to go astray.

I testify that there is no deity worthy of worship except Allah. He is One and He has no partner. I also testify that Muhammad is His Slave and Messenger. Allah sent him with the religion of guidance so that it may prevail over all other religions even if the disbelievers dislike that.

Speaking about scientific miracles has become a necessity these days, as knowledge has made great and rapid strides that cannot be stopped even for a moment. Everyday there are new inventions and astounding discoveries. All this strengthens a Believer's faith and increases confusion in the confused person.

Allah has blessed me with collecting all the conclusions that have been arrived at by the leaders in this art of scientific and medical miracles. I, then, decided that this compilation should comprehensively include every topic relating to miracles either from the Qur'an or from the authentic Sunnah. Some repetitions may be found in this work due to some benefits such as considering the differences in the scholars'



methodologies of writing about one topic. The wisdom of this may be found in the popular saying: "You might find in a stream what you might not find in a sea."

Dear reader, on my part I have selected for you the most comprehensive, most authentic, most modern and most beautiful of these proofs. For the purpose of authentication, some of the specialists in these fields have shared their knowledge with me. I would mention, as an example, Dr. Muhammad Harb, a specialist obstetrician and gynecologist and Jihad 'Inayah and Mahir Kabab, who are both pharmacists. I am very grateful to them.

There is no doubt that this work that you are reading, as a first step on what the modern science has arrived at in our contemporary times, has already been mentioned in the Qur'an and mentioned by the Messenger of Allah, peace be upon him, more than 1,400 years ago. This is certainly not going to be the end either. There shall continue to be more and more discoveries that will show humanity that the Qur'an is truly Allah's Word. Allah says about the Qur'an:

﴿لَا يَأْتِيهِ الْبَاطِلُ مِنْ بَيْنِ يَدَيْهِ وَلَا مِنْ خَلْفِهِ تَنْزِيلٌ مِنْ حَكِيمٍ حَمِيدٍ﴾

"Falsehood cannot come to it from before it or behind it; (it is) sent down by the All-Wise, Worthy of all praise (Allah, Glorified and Exalted be He)." (Soorah Fussilat 41:42)

He also says:

﴿وَمَا يَنْطَلِقُ عَنِ الْهَوَىٰ ۖ إِنْ هُوَ إِلَّا وَحْيٌ يُوحَىٰ﴾

"Nor does he speak of (his own) desire. It is only a Revelation revealed." (Soorah An-Najm 53:3-4)

This book includes two main topics. The main sections are:

1. Miracles in the sea
2. Miracles in animals

In short, these are the most important topics discussed in this work. I beseech Allah to make all that I have collected and written to make a reminder for those who have sound hearts, the ability to listen and

have presence of mind, and to make it purely for His sake and to benefit me and the Muslims as a whole with it. Indeed, He has power over all things and He is worthy of accepting prayers. All praise is due to Allah, the Lord of the worlds. May the blessings and peace of Allah be upon our leader Muhammad, his family and his Companions.

Servant of the *Sunnah*

Yusuf Al-Hajj Ahmad



# Scientific Miracles in the Oceans

Modern images taken of the seas and oceans prove that the world's seas are not all the same in composition. Rather, they vary in temperature, salinity, density and oxygen content. In images taken by satellites each sea appears to be of a different color from the others. Some appear dark blue, some appear black and others appear yellow. This is due to the difference in temperature of each sea or ocean. In images taken from satellites using thermal imaging techniques, there also appears a thin white line separating one sea or ocean from another. This is what is called Barzakh (barrier).

Allah, the Exalted, says:

﴿مَرَجَ الْبَحْرَيْنِ يَلْتَقِيَانِ ﴿١٩﴾ بَيْنَهُمَا بَرْزَخٌ لَا يَبْغِيَانِ﴾

"He has let loose the two seas (the salt and freshwater) meeting together. Between them is a barrier which none of them can transgress." (Soorah Al-Rahman, 55:19-20)





Allah, the Exalted, describes water as being blessed, i.e., productive and says:

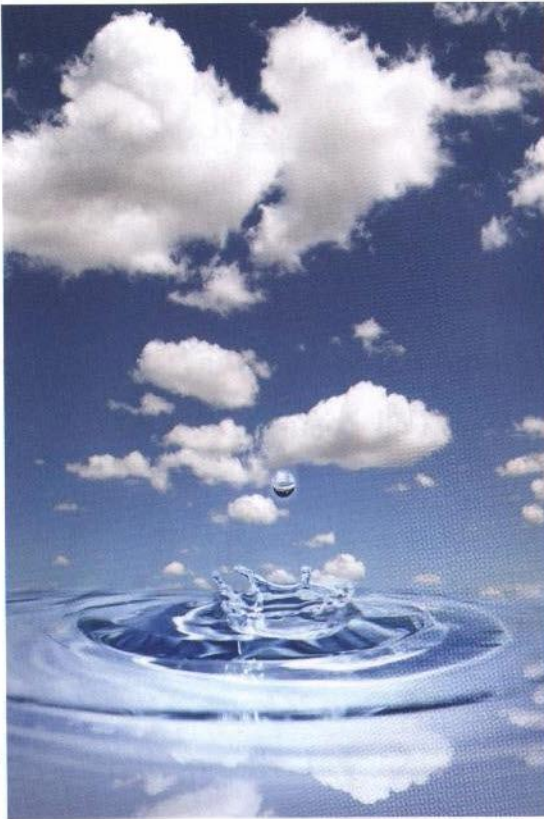
﴿وَزَلْنَا مِنَ السَّمَاءِ مَاءً مُبَارَكًا  
فَأَنْبَتْنَا بِهِ جَنَّاتٍ وَحَبَّ  
الْعَصِيدِ﴾

"And We send down blessed water (rain) from the sky, then We produce therewith gardens and grain (every kind of harvests) that are reaped." (Soorah Qaf, 50:9)

The sending down of rain from the Heavens and reviving the earth after it is dead are signs of the existence of Allah, the Almighty. He says:

﴿إِنَّ فِي خَلْقِ السَّمَوَاتِ وَالْأَرْضِ وَاخْتِلَافِ اللَّيْلِ وَالنَّهَارِ وَالْفُلْكِ الَّتِي تَجْرِي فِي الْبَحْرِ بِمَا يَنْفَعُ  
النَّاسَ وَمَا أَنْزَلَ اللَّهُ مِنَ السَّمَاءِ مِنْ مَّاءٍ فَأَخْيَا بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا وَبَثَّ فِيهَا مِنْ كُلِّ دَابَّةٍ  
وَوَصْرِيفِ الرِّيحِ وَالسَّحَابِ الْمُسَخَّرِ بَيْنَ السَّمَاءِ وَالْأَرْضِ لَآيَاتٍ لِقَوْمٍ يَعْقِلُونَ﴾

"Verily, in the creation of the heavens and the Earth, and in the alternation of night and day, and the ships which sail through the sea with that which is of use to mankind, and the water (rain) which Allah sends down from the sky and makes the earth alive therewith after its death, and the moving (living) creatures of all kinds that He has scattered therein, and in the veering of winds and clouds which are held between the sky and the Earth, are indeed Aayat (proofs, evidences and Signs, etc.) for people of understanding." (Soorah Al-Baqarah, 2:164)



﴿وَمِنْ آيَاتِهِ يُرِيكُمْ الْبَرْقَ خَوْفًا وَطَمَعًا وَيُنْزِلُ مِنَ السَّمَاءِ مَاءً  
فَيُخْرِجُ بِهِ الْأَرْضَ بَعْدَ مَوْتِهَا إِنَّ فِي ذَلِكَ لَآيَاتٍ لِقَوْمٍ يَعْقِلُونَ﴾

"And among His Signs is that He shows you the lightning, for fear and for hope, and He sends down water (rain) from the sky, and therewith revives the earth after its death. Verily, in that are indeed Signs for a people who understand." (Soorah Al-Room, 30:24)

Allah, Most High, reminds the disbelievers that He has made every living thing from water and says:

﴿أَوَلَمْ يَرِ الَّذِينَ كَفَرُوا أَنَّ السَّمَوَاتِ وَالْأَرْضَ كَانَا رَتْقًا  
فَفَنَقْنَهُمَا وَجَعَلْنَا مِنَ الْمَاءِ كُلَّ شَيْءٍ حَيٍّ أَفَلَا يُؤْمِنُونَ﴾

"Have not those who disbelieve known that the heavens and the Earth were joined together as one united piece, then We parted them? And We have made from water every living thing. Will they not then believe?" (Soorah Al-Anbiya', 21:30)

Allah, the Exalted, describes water as being one of the blessings of Paradise, and states that the people of Hell will be tormented by being deprived of it. He says:

﴿وَنَادَىٰ أَصْحَابُ النَّارِ أَصْحَابَ الْجَنَّةِ أَنْ أَفِضُوا عَلَيْنَا مِنَ الْمَاءِ أَوْ  
مِمَّا رَزَقَكُمُ اللَّهُ قَالُوا إِنَّ اللَّهَ حَرَّمَهُمَا عَلَى الْكَافِرِينَ ﴿٥٠﴾  
الَّذِينَ اتَّخَذُوا دِينَهُمْ لَهْوًا وَلَعِبًا وَغَرَّتْهُمُ الْحَيَاةُ  
الدُّنْيَا فَالْيَوْمَ نَنسِفُهُمْ كَمَا نَسَوُا لِقَاءَ يَوْمِهِمْ هَذَا  
وَمَا كَانُوا بِآيَاتِنَا يَحْدِثُونَ﴾

"And the dwellers of the Fire will call on the dwellers of Paradise: 'Pour on us some water or anything that Allah has provided you with.' They will say: 'Both (water and provision) Allah has forbidden to the disbelievers who took their religion as an amusement and play, and







Section : 1

## The Power of the Sea

﴿وَإِذَا مَسَّكُمُ الضُّرُّ فِي الْبَحْرِ ضَلَّ مَنْ تَدْعُونَ إِلَّا إِلَهُهُ فَلَمَّا بَلَغَكُمُ الْإِلَهَ الْأَعَزُّ شَمَّتْكُمْ وَكَانَ الْإِنْسَانُ كَفُورًا﴾

"And when harm touches you upon the sea, those that you call upon vanish from you except Him (Allah, Alone). But when He brings you safe to land, you turn away (from Him). And man is ever ungrateful." (Soorah Al-Isra, 17:67)

The water that fills the oceans and seas, lakes and rivers, streams and channels, all comes from one source: atoms of hydrogen united with atoms of oxygen, which together form water.

It flows constantly, never changing, bringing life. But does water always bring life? No. Sometimes water is the strongest and harshest force on earth; it sweeps away everything that stands in its path no matter what it is. It causes disasters and floods in which rocks and solid objects are destroyed. Hence, we see in the oceans such beauty and depth, such

awe-inspiring force that could be a cause for potential danger and fear.

Perhaps the most amazing phenomenon occurring at sea are the storms and hurricanes which last for three or four days, nonstop, with waves as high as mountains and troughs as deep as valleys, with waves seemingly reaching up to the sky with no land or horizon to be seen.

Waves which are usually 25 feet high may reach a height of 130 feet during the storm. If you realize that a foot-high wave has a destructive force of six thousand pounds, you can imagine the extent of the destruction that can be wrought by these waves.

According to records, in 1872 a strong wave in Scotland dislodged an iron anchor weighing 1,700,000 lbs, and another wave carried a rock weighing 175 thousand pounds to a height of 100 feet! In 1737, in the port of Babjok there was a storm which killed 300,000 people and wrecked 20,000 ships.

﴿أَوْ كَظُلُمَاتٍ فِي بَحْرٍ لُجِّيٍّ يَغْشَاهُ مَوْجٌ مِّنْ فَوْقِهِ مَوْجٌ مِّنْ فَوْقِهِ سَحَابٌ ظُلُمَاتٌ بَعْضُهَا فَوْقَ بَعْضٍ إِذَا أَخْرَجَ يَدَهُ لَمْ يَكْدِ بِهَا وَمَنْ لَمْ يَجْعَلِ اللَّهُ لَهُ نُورًا فَمَا لَهُ مِن نُّورٍ﴾ (١٠) ﴿الْقُرْآنُ أَنَّ اللَّهَ يُسَبِّحُ لَهُ مَنْ فِي السَّمَوَاتِ وَالْأَرْضِ وَالطَّيْرِ صَفَّتْ كُلُّ قَدِّعِلْمٍ صَلَاتَهُ وَتَسْبِيحَهُ وَاللَّهُ عَلِيمٌ بِمَا يَفْعَلُونَ﴾







Lava erupting into Pacific Ocean during evening on Big Island

## The Sea Set on Fire

■ Dr. Zaghoul An-Najjar

Allah, the Almighty, says in His Holy Book:

﴿وَالْبَحْرُ الْمَسْجُورُ﴾

"And by the sea kept filled (or it will be fire kindled on the Day of Resurrection)." (Soorah Al-Toor, 52:6)

This Verse comes in the form of an oath, although Allah, the Exalted, is far above any need to swear an oath; hence, we understand that the object by which the oath is sworn – "the sea kept filled (or it will be fire kindled on the Day of Resurrection)" – is of special significance. What,

then, is the special significance of the sea kept filled or the sea set on fire?

Water and fire are incompatible substances, as water extinguishes fire, and fire makes water boil and causes it to evaporate. So how can the sea which is filled with water be set on fire?

Because of this contradiction, the early commentators suggested that this was something that would happen on the Day of Resurrection, on the basis of another Verse that gives the same meaning, which is the sixth verse of Soorah Al-Takweer:

﴿وَإِذَا الْبَحَارُ سُجِّرَتْ﴾

"And when the seas become as blazing fire or overflow".

However, the context of this Verse (in Soorah Al-Toor) and the five preceding Verses point to things that are happening in our present life, so the exegetes tried to find a linguistic meaning other than "setting on fire".

Among the meanings that were derived from this word was the following: "the sea that is filled with water and is prevented from overwhelming neighboring continental masses." This meaning is correct, because the largest quantity of freshwater today, which comprises 77 percent of all the water on land, is entrapped in the form of thick layers of ice on the polar regions of the north and south, as well as the snow that covers the summits of high mountains. Melting of this enormous amount of ice needs no more than an increase of 4 to 5 degrees Celsius in the average summer temperature. If that happens, the water level in



champagne pool near Rotorua New Zealand



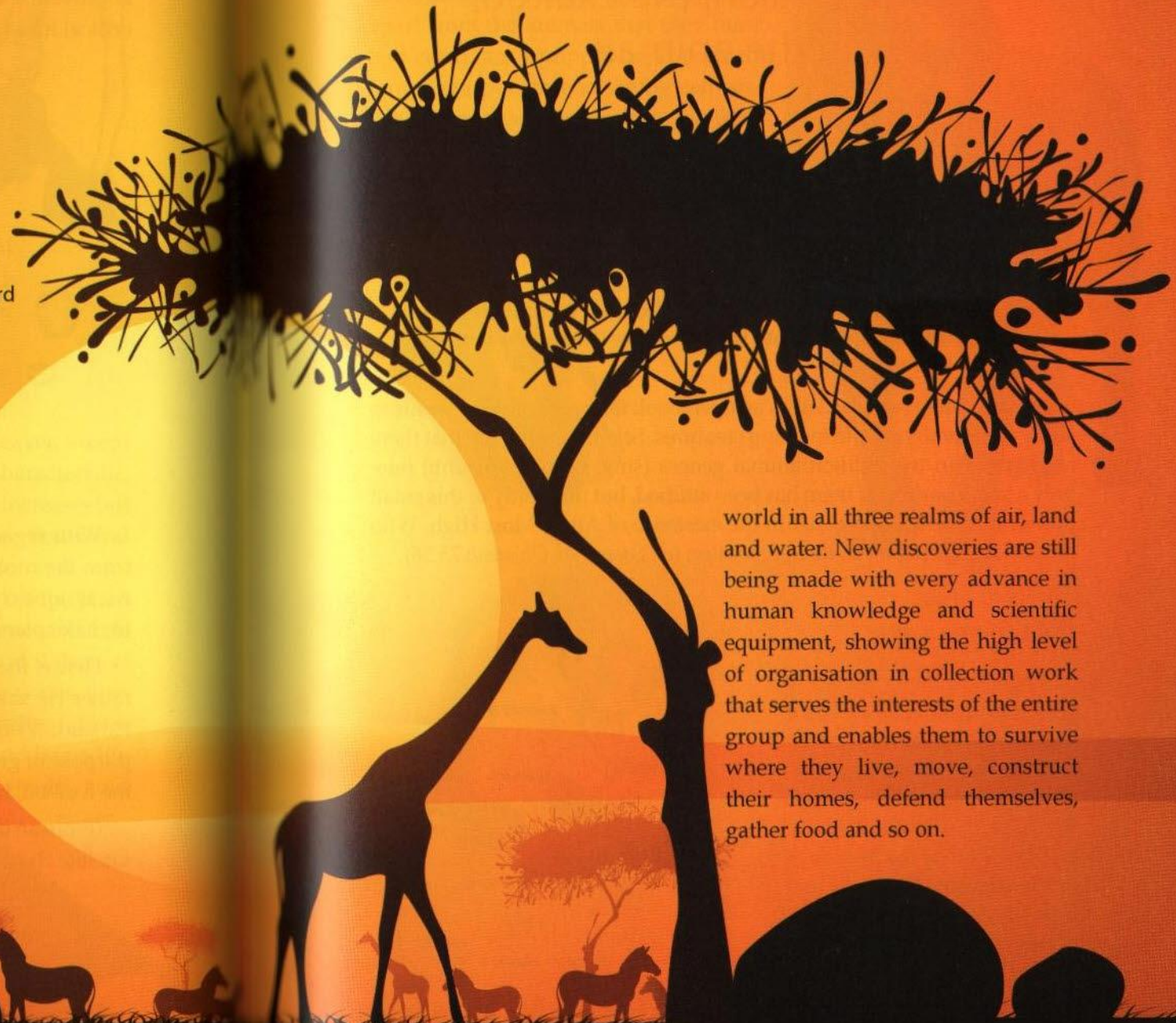
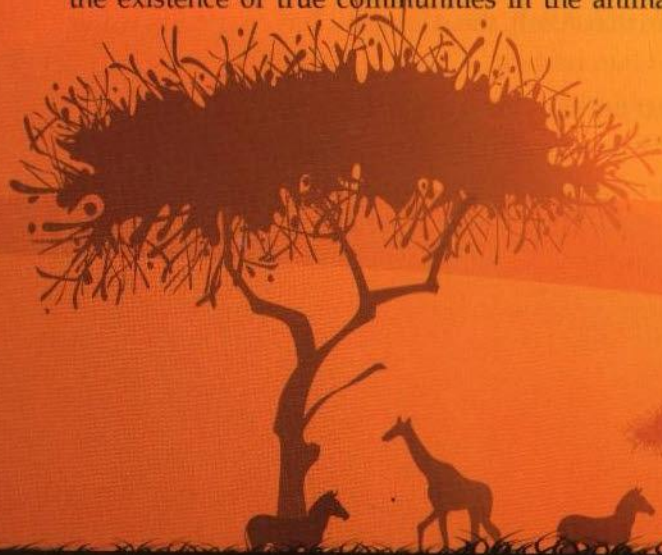
# Scientific Miracles in the Animals

Allah, the Exalted, says:

﴿وَمَا مِنْ دَابَّةٍ فِي الْأَرْضِ وَلَا طَائِرٍ يَطِيرُ بِجَنَاحَيْهِ إِلَّا أُنْمِثَ أَمَلُهُمْ  
مَا قَرَّرْنَا فِي الْكِتَابِ مِنْ شَيْءٍ ثُمَّ إِلَىٰ رَبِّهِمْ يُحْشَرُونَ﴾

"There is not a moving (living) creature on Earth, nor a bird that flies with its two wings, but are communities like you. We have neglected nothing in the Book, then, unto their Lord they (all) shall be gathered." (Soorah Al-An'am, 6:38)

There have been detailed studies of animal communities and their behavior, for which various kinds of equipment and methods have been used, even satellites. Researchers have discovered the existence of true communities in the animal



world in all three realms of air, land and water. New discoveries are still being made with every advance in human knowledge and scientific equipment, showing the high level of organisation in collection work that serves the interests of the entire group and enables them to survive where they live, move, construct their homes, defend themselves, gather food and so on.





## Bones of animals

One of the wonders that have been discovered by zoologists is that birds are lighter than other animals of the same size. By means of dissection it was discovered that the bones of birds are thin and hollow, so as to make their bodies lighter and thus enable them to fly.

One of the most in-depth studies from which we may see the Divine power of design and creation at work is what we see in the feet of animals. Those which characteristically run have strong feet which help them to run quickly, and each foot ends in solid material which protects the foot from being harmed by too much running, as in the case of donkeys and horses.

Cattle and buffalo have short, strong feet ending in a solid, cloven hoof, which helps them to walk on soft farmland, whereas the feet of camels end in a split hoof under which there is a thick pad called the *Khuff*, to prevent the foot from sinking into the sand; on its feet and

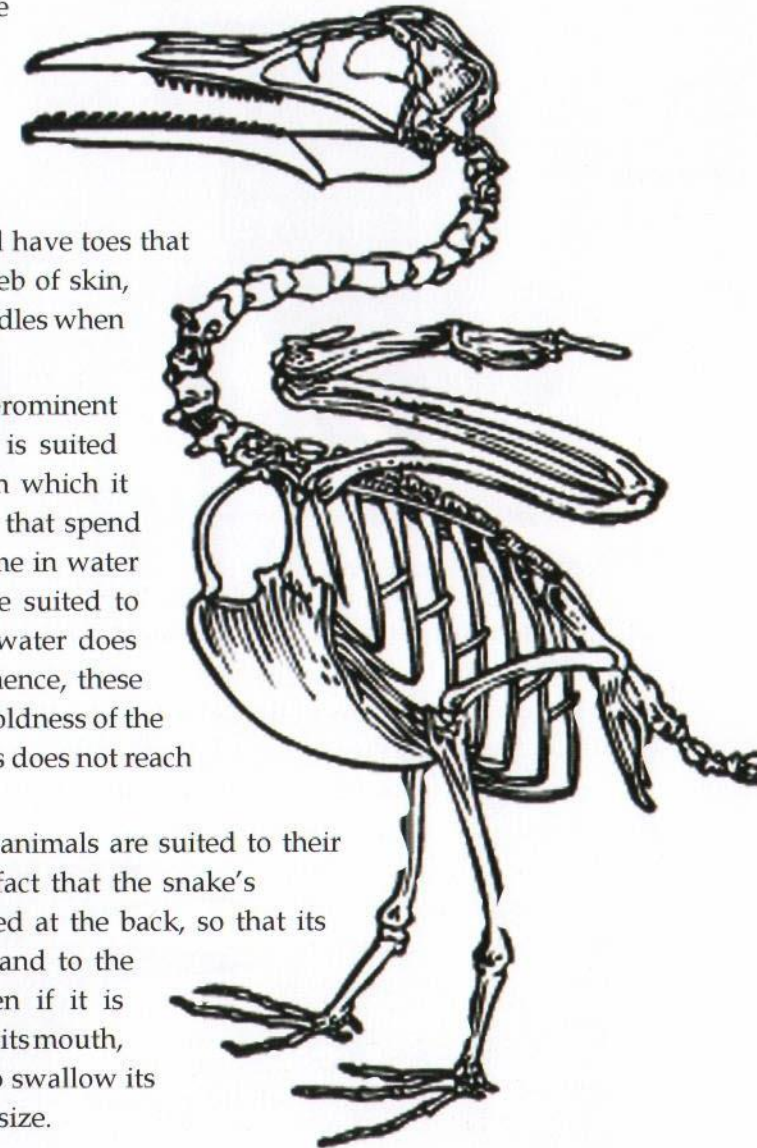
knees there are also pads of thick skin to protect it from pebbles and sand when it kneels down.

The feet of birds that feed on meat have strong talons at the front, which are curved to help them capture their prey, like eagles, falcons, owls, kites and so on.

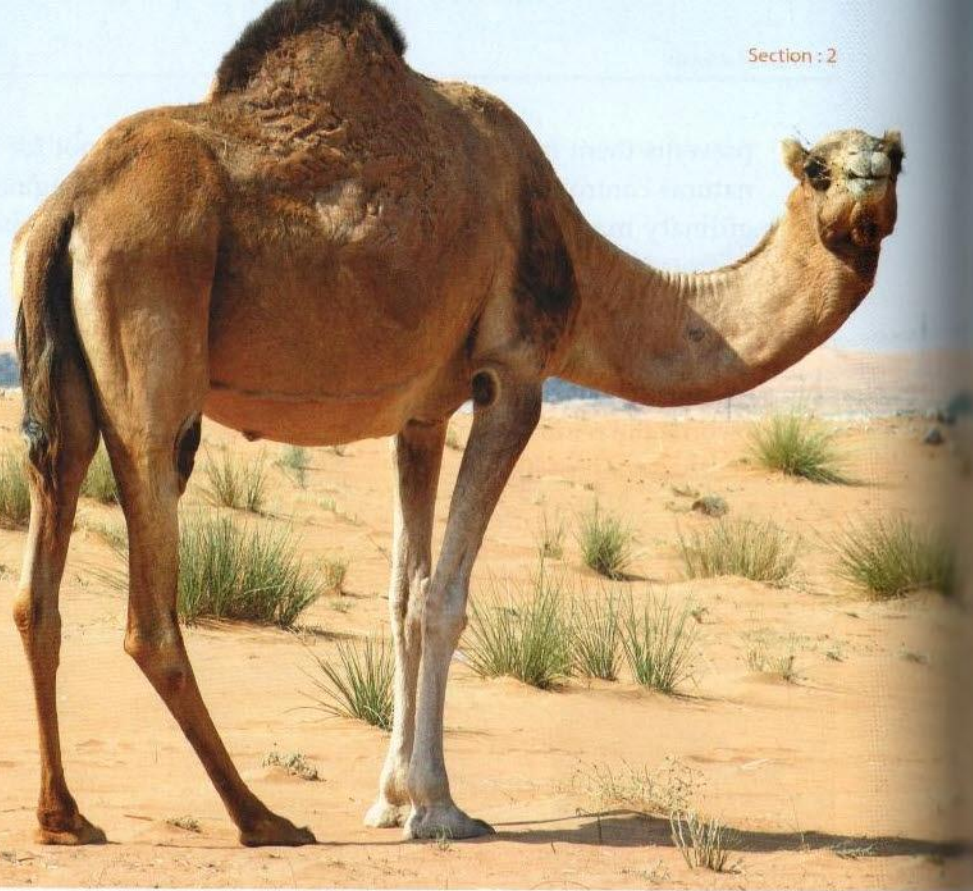
Birds which feed on seeds, such as chickens and pigeons, have pointed claws on their feet which are used to scratch the ground. Birds which have to search in water for their food have toes that are connected by a web of skin, which they use as paddles when swimming.

One of the most prominent signs that an animal is suited to the environment in which it lives is that the birds that spend lengthy periods of time in water have feathers that are suited to that situation as the water does not adhere to them; hence, these birds do not feel the coldness of the water and the wetness does not reach their bodies.

Another sign that animals are suited to their environments is the fact that the snake's jaws are not connected at the back, so that its mouth is able to expand to the size of the prey even if it is greater than the size of its mouth, so the snake is able to swallow its prey regardless of its size.







## The Camel

Allah, the Exalted, says:

﴿أَفَلَا يَنْظُرُونَ إِلَى الْإِبِلِ كَيْفَ خُلِقَتْ﴾

"Do they not look at the camels, how they are created?" (Soorah Al-Ghashiyah, 88:17)

In this Verse, the Creator gently urges us, in words that the Believers take as an instruction, to meditate on His creation of the camel as a creature that points to the greatness of the Creator, the perfection of His power and the beauty of His control.

We will see that the amazing facts that science has recently discovered

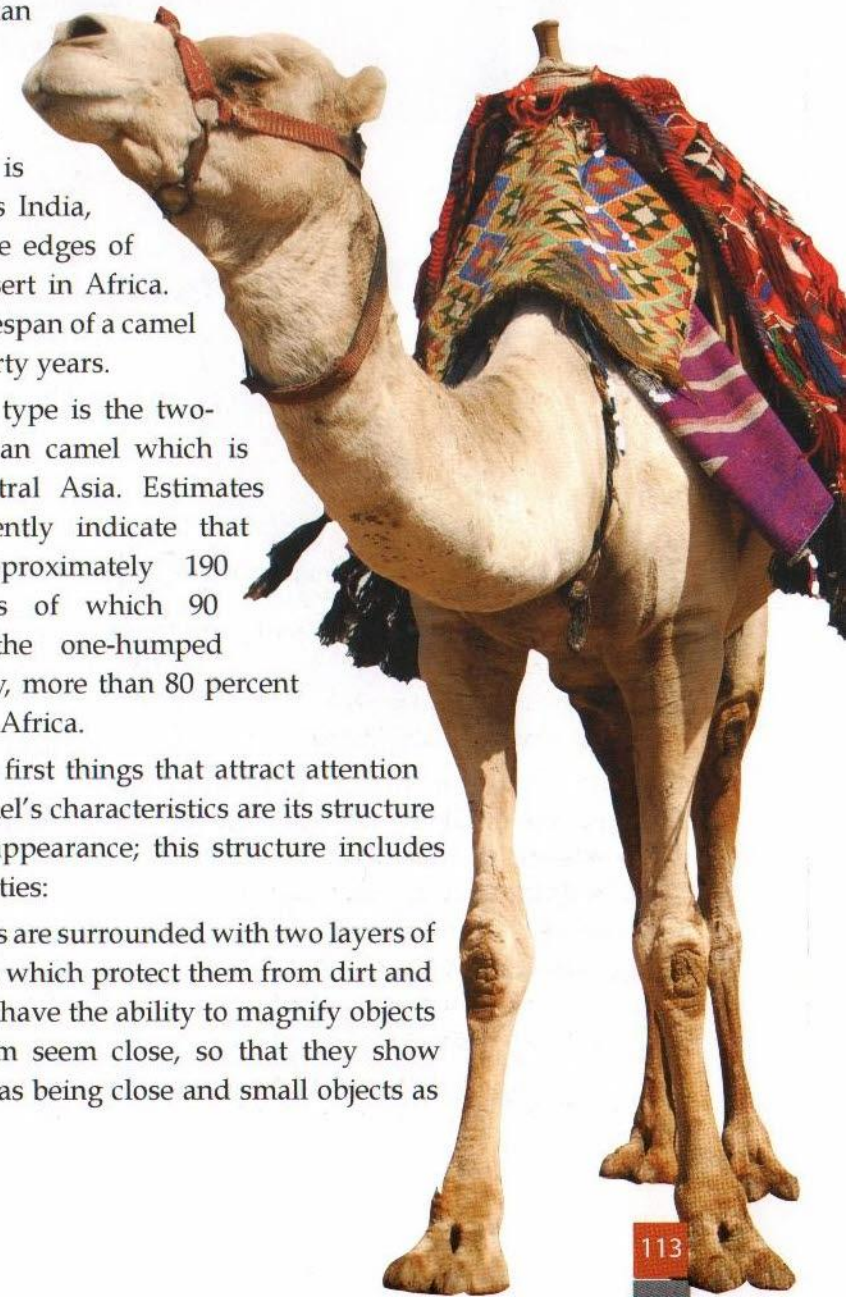
about the camel explain to us some of the reasons why Allah, Most High, selected this amazing creature, from among His innumerable creations, to remind those who ponder to study it, whether it is the Bedouin with his innate sound human nature (*Fitrah*) at the dawn of Islam or biologists with their modern equipment at the dawn of the twenty-first century.

It is well-known that camels are of two types. The first is the one-humped Arabian camel which is widely visible in the Arabian Peninsula; it is found as far as India, and west to the edges of the Sahara Desert in Africa. The average lifespan of a camel is more than forty years.

The second type is the two-humped Bactrian camel which is native to Central Asia. Estimates published recently indicate that there are approximately 190 million camels of which 90 percent are the one-humped Arabian variety, more than 80 percent of which are in Africa.

Perhaps the first things that attract attention among the camel's characteristics are its structure and outward appearance; this structure includes amazing subtleties:

- ♦ The eyes are surrounded with two layers of long eyelashes, which protect them from dirt and sand. The eyes have the ability to magnify objects and make them seem close, so that they show distant objects as being close and small objects as







## Mosquitoes

One of the Signs of Allah, the Exalted, that points to His Greatness is the Verse in which He says:

﴿إِنَّ اللَّهَ لَا يَسْتَحْيِي أَنْ يَضْرِبَ مَثَلًا مَّا بَعُوضَةً فَمَا فَوْقَهَا فَأَمَّا الَّذِينَ ءَامَنُوا فَيَعْلَمُونَ أَنَّهُ الْحَقُّ مِنْ رَبِّهِمْ وَأَمَّا الَّذِينَ كَفَرُوا فَيَقُولُونَ مَاذَا أَرَادَ اللَّهُ يَهْدِي مَثَلًا يَضِلُّ بِهِ كَثِيرٌ وَيَهْدِي بِهِ كَثِيرٌ وَمَا يُضِلُّ بِهِ إِلَّا الْفَاسِقِينَ﴾

"Verily, Allah is not ashamed to set forth a parable even of a mosquito or so much more when it is bigger (or less when it is smaller) than it. And as for those who believe, they know that it is the Truth from their Lord, but as for those who disbelieve, they say: 'What did Allah intend by this parable?' By it He misleads many, and many He guides thereby. And He misleads thereby only those who are Fasiqoon (the rebellious, disobedient to Allah)." (Soorah Al-Baqarah, 2:26)

If a mosquito landed on your arm, you would kill it and not feel a thing; it would be as if nothing happened, because you regard it as insignificant. Even the Prophet, peace and blessings of Allah upon him, said: "If this world were equivalent before Allah to a mosquito's wing, He would not allow a disbeliever to have a drink of water." (At-Tirmithi)

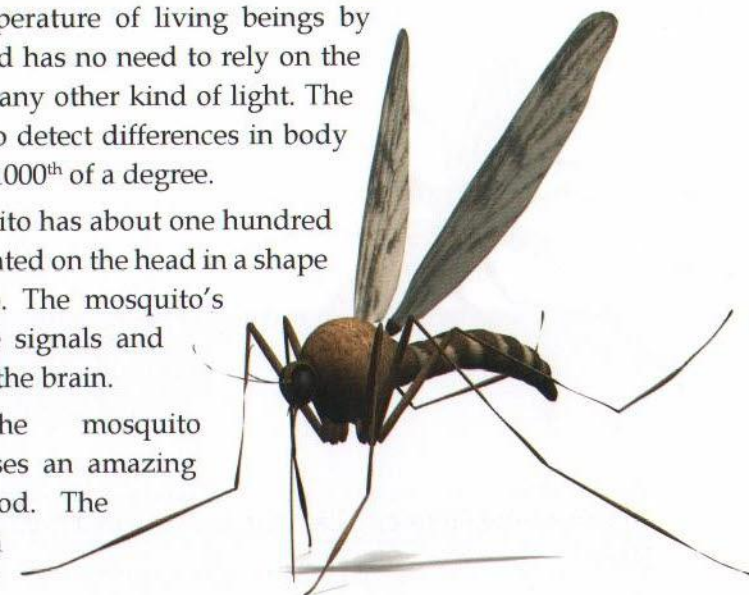
Would you believe that a mosquito has radar equipment? In the darkness of the night it makes straight for the man who is sleeping in his bed, without missing its target. The mosquito has the ability to detect the temperature of living beings by means of color, and has no need to rely on the rays of the sun or any other kind of light. The mosquito is able to detect differences in body temperature to 1/1000<sup>th</sup> of a degree.

★ The mosquito has about one hundred eyes which are located on the head in a shape like a honeycomb. The mosquito's eye receives these signals and transmits them to the brain.

★ When the mosquito sucks blood, it uses an amazing mechanical method. The complex system that it uses is as

follows: when it lands on its target, it chooses a spot using its lips that are found on its proboscis. The mosquito has a needle wrapped in a sheath that it brings out when it sucks blood.

The skin is not pierced by this needle as is often imagined. Rather there is something else that does this action, which is the upper jaw that is like a knife, and the lower jaw that has teeth which lean inward. The lower jaw acts like a saw, i.e., it moves like a saw and pierces the skin with the help of the upper jaw which acts like a knife. Then the needle is inserted into the hole and reaches the vein from which it sucks blood.







Python with its eggs

## Amazing care given by living creatures to their eggs and the young ones

It is well-known that living beings expend a great deal of effort in caring for their eggs and young ones and they endure a great deal of hardship in doing so. They conceal them from the eyes of their enemies and protect the eggs from being broken, besides keeping them at a reasonable temperature and not exposing them to intense heat. They move the eggs from one place to another if they sense any danger that threatens them, and they continue to guard them for several weeks without getting tired or bored. Some of them even carry the eggs in their mouths.

We may note these behavioral patterns that are filled with mercy

and kindness in many species of fish, birds and reptiles.

★ For example, the python which may pose a serious danger to the life of man, handles its eggs in a very kind and gentle manner. This snake lays approximately 100 eggs at a time then it curls up around the eggs. The purpose of this curling up is to protect the eggs from high temperatures by shading them, and protecting them from the cold by lifting its body up and away from them. The eggs remain free of danger so long as the mother snake remains curled up around them. By means of this care, the female python reduces the danger faced by the young ones when they are still inside the eggs.

★ There are some kinds of fish that exhibit remarkable behavior in caring for their young while they are still inside the egg. The female fish collects the eggs in her mouth as a means of protecting them; hence, this species is known as "mouth-brooding fish." The young fish will quickly swim to their mother's mouth when they sense danger.



This behavior is common in the catfish which will swim for several weeks with its mouth filled with eggs the size of small ball bearings. The fish shakes its mouth from time to time to shift the eggs and allow the oxygen that is dissolved in water to reach them. When the eggs hatch, the small, weak youngsters spend the next few weeks in their father's mouth. During this period the male does not eat at all, and it uses the stores of fat in its body to continue its vital functions.

★ The frog is regarded as another example of a living being that carries its eggs and its young ones in its mouth. The female Rhinoderma frog carries the eggs inside her body, and when the mating season comes, the females lay their eggs on the ground and the males go around the eggs in a movement which demonstrates their ability to