**Prominent Scientists in Biology**

Biology is the result of research and thinking of some great scientists. This chapter introduces you with some of these scientists.

 Aristotle (384-322 B.C): The great Greek scientist, Aristotle is regarded as thefather of Zoology. He first established Zoology as a branch of Science. Aristotle was simultaneously a scientist, poet, thinker and philosopher. It is he who first mentioned about the basic similarities in the structure of plants and animals. He stayed in an island named Lesbos for five years continuously and made research on animals. He wrote a book on animals and named it "Historia animalium" which is full of information and knowledge.

Theophrastus (370-285 B.C.): Little amount of works of the Greekphilosopher Theophrastus is known to us. Of those available, nine volumes of "On the History of Plants" and six volumes of "On the causes of plants" are important. Theophrastus was the pupil of great philosopher Aristotle. He divided the plant community into four groups. For example: Trees shrubs, Undershrubs and Herbs. He is regarded as the Father of Botany.

Al Biruni (973-1048): Known as an world famous scientist and educationist.Al Biruni was an Arabian citizen. His real name is Abu Raihan Mohammad Ibne Ahmed Al Biruni. He made contributions in different branches of science. He visited India during the reign of Sultan Mahmud of Ghazni and described the conditions prevailing in India in an attractive way.

Ibne Sina (980-1037): He was a renowned Muslim philosopher and scientist.He had excellent skill in Chemistry, Medicine, Mathematics, Astronomy and Literature. His full name is Abu Ali Hussain Ibne Abdullah Ibne Sina. He composed more than hundred books on different subjects. Sixteen of which were written on Medicine. He had a fourteen volume compositions named Al- Kanun' on Medicine.

A1 Nafis: He was an Arabian scientist. He first (300 years before WilliamHarvey) described correctly the system of blood circulation in human body. He was also a successful physician. His actual name was Abu Al Hasan Ali Ibne Al Nafis, He dedicated himself in the field of science for a long time, and died in Damascus at the age of eighty.

William Harvey (1578-1657): William Harvey was a British scientist. Herediscovered the system of blood circulation in 1628 and as a result some of the previous ideas about it came to an end. In 1651 he pointed out that life starts from the egg cell. He is considered to be the father of Animal Physiology. He clearly described the systems of blood circulation and excretion in animals, and explained the relationship between the two processes. He published a book "On the motion of the heart and blood in animals".

Anthony Von leenwenhoek (1632-1723): Dutch scientist leeuwenhoek firstbuilt the microscope. But his microscope was not like that of today. Descriptions of bacteria, nerve cell, Hydra, Volvax, etc. were written by him on observations through his microscope. They have been found to be precisely correct.

Carolus Linnaeus (1707-1778): Swedish scientist Linnaeus introduced thesystem of Binomial Nomenclature for plants and animals. A physician by profession, he was the professor of physiology in Uppsala University, Sweden. Collecting numerous plants and animals he classified them and made their nomenclature. His "Systema Naturae" composed on classification of living beings is a famous research work. Besides this his other two famous Botanical books titled "Species Plantarum" and "Genera Plantarum" are based on research work. He is considered to be the father of modern Taxonomy.

Charles Robert Darwin (1809-1882): English naturalist Darwin introducedthe Theory of Natural Selection. He expressed his findings and ideas in his famous research publication, "Origin of Species by Means of Natural Selection" in the year 1859, after observing the living communities of Galapagos Islands.

Alfred Russel Wallace (1823-1913): English naturalist Wallace madeobservation and research works in the Amazon plateau for four years. His renowned book `Travels on the Amazon and Rio Negro" was written on this experience. He wrote "The Malay Archipelago" on his eight years research experience in Malay Peninsula. The huge collection of insects he made has been kept preserved in the Hope collection centre of Oxford University. He is famous for the introduction of Natural Selection Theory along with Charles Darwin.

Gregor Johann Mendel (1822-1884): Austrian Priest Mendel performedresearch work with pea plants in his church garden for a long time. Based on this research he established two laws concerning genetics, which are followed till today. He is regarded as the father of Genetics.

George Bentham (1800-1884): The most notable work of this EnglishBotanist is the composition of three volumes of "Genera Plantarum" along with Joseph Dalton Hooker.Other books written by him are `Handbook of the British Flora'. `Flora Hongkongensis', Flora `Australiensis' etc.

Thomas Henly Huxley (1825-1895): Renowned British Zoologist T.H.Huxley did a lot of works on birds. He termed birds as `glorified reptiles' and proved that birds have been evolved from the reptilian ancestors. Besides, he made extensive research on Zoology. He was a notable supporter of Charles Darwin's theory of Natural Selection. Huxley described protoplasm as the physical basis of life.

Alexander Fleming (1881-1955): Alexander Fleming was a MicrobiologistsHe observed in 1918 that some bacterial growth stops in a culture media where Penicaillium is grown. He tried to find out the reason behind it. From his quest and research he subsequently discovered the drug penicillin that has saved millions of lives. He won Nobel Prize along with two other winners in the year 1945.

David Prain: David Prain was an English physician. He obtained degree inmedicine from Aberdin and Edinburgh. Joining Indian Medical Service he cameto  India  in  1883.  His  first  Place  of  Posting  was  Luxmipur  in  Noakhali.Later he started research with the plants of this region. He was the Director ofCalcutta Botanical Garden from 1887 to 1897. His famous book, "Bengal Plants", Published in two volumes, widely treats plants of Bangladesh and adjoining areas. "Flora of Sundribuns" is another notable book written by him.

Salim Ali (1896-1987): Known as the Birdman of India, Salim Ali was arenowned ornithologist. He scientifically observed all birds of India and wrote an informative book. The title of the book is "The Indian Birds" In addition to this he composed many other books on birds. His autobiography is also a famous publication. In 1983 the Indian Government awarded him "Padmabhushan" title in recognition of his research work.

Sir Hans Krebs (1900-1981): English scientist Krebs won Nobel Prize in 1953along with F.A. Lipmann in medicine and physiology for his research work on metabolism of cells. He was appointed as the departmental head of Biochemistry in the Oxford University in 1954. Krebs cycle of respiration in living beings is his discovery.

James Watson and Francis Crick: The two British scientists, Watson andCrick are famous for making the model of the molecular structure of DNA which bears the hereditary factors of human beings. While carrying out the research for PhD Degree in Cambridge University they discovered the molecular structure of DNA in 1953. They won Nobel Prize in the year 1963 for this work. Watson and Crick first noticed that DNA molecule is structurally a double helix and spiral.

Melvin Calvin (Born in 1911): Calvin, a professor of California UniversityU.S.A. is famous for his research concerning the pathway of carbon assimilation in green plants. In co-operation with other scientist Bassham, discovered the biochemical steps of Carbon assimilation known as Calvin Bassham pathway of photosynthesis. He obtained Nobel Prize in 1961.