IN THE NAME OF ALLAH, THE MERCIFUL, THE COMPASSIONATE

ABSTRACT

The concept of 'ilm' as advanced in the Holy Quran laid the foundation of muslim culture, civilization and knowledge and guided it towards its zenith. It shaped our thought and method of inquiry and made us a dynamic and living force within a matter of decades. But when we decided to sacrifice every Islamic tenet at the alter of western modernisation and progress we lost our identity. Decadence started and we lost control of things. It seemed as if we would never be able to recover. But then the Almighty Allah inspired some of the scholars amongst us and a wave of Islamic ressurgence began. This process of the revival picked up momentum and since about the turn of the fifteenth Hijra, muslim Scientists are trying to study the teachings of the Holy Quran and the Sunnah and develop a scientific methodology of research on the basis of these teachings. The present work is also an attempt in this direction. The author has studied some of the biological teachings of the Holy Quran and has also tried to explain the sayings of the Holy Prophet (may the peace and blessings of Allah be on him) concerning the biosphere, existence of human beings and their relationship with other animals and plants. Problems arising out of the present day environmental crisis and the need for personal hygiene has also been investigated in the light of Islamic values and teachings.

In its simple and straightforward manner of expressing truth Islam has a tremendous appeal for persons of rational thinking.
Al'Quran includes knowledge of all branches of Science and the same is true of Biological Sciences. We were given knowledge of such phenomenon as human anatomy and reproduction, nutritional physiology and environmental Biology much before the West became aware of these realities. Thus in part one of the thesis, the writer has made an attempt to explain the biological process of the truth that Allah is the Creator of the biosphere and that he has created the heavens and the earth and all that there is in between them in stages, the length of a stage being beyond human reckoning. It is really amazing how exactly the presence of smoke in the early stages of the Universe as told to us in Surah 'Ham-Mim-Sajdah' corresponds to modern concept of primary nebula of gaseous material. Indeed the information available with the biologists such as the cooling of the globe and the formation of water as forerunner of all living things is the biological explanation of the thirtieth verse of Surah 'Al-Ambiya' wherein we have been told that the heavens and the earth were closed up until the Almighty Allah rent them and made of water everything living.

The process of human embryology and the determination of the sex of a child has been explained to prove the teachings imparted in the fifth verse of Surah 'Al-Hajj', twelveth verse of Surah 'Al-Muminun', second verse of Surah 'Al-Dahr' and fortweth and fifteth verses of Surah 'Ash-Shura'.

There is no doubt that man is the best of the Creation of Allah on this earth. He is the wisest and can excercise
control over other animals. Biological studies on human skeleton, physiology and psychology firmly prove these facts and tell us the truth that has been taught to us in the fourth verse of Surah 'Al-Tin'. Indeed Allah has created man in the goodliest form and there are signs on this earth for those who wish to be convinced of the supreme, everlasting power of Allah.

In Surah 'Al-Baqarah', Surah Bani-Israil and again in Surah Al-Takwir - we have been told to pay special attention to the diet of the infants. It is incumbent upon the mothers to breast feed their babies so as to provide them with the much needed nutrients that are found only in the mothers' milk. Certainly the milk of the mother contains specific nutrients that are needed by the baby. No wonder therefore, that the Holy Prophet (may the peace and blessings of Allah be on him) remarked that it is better for the mothers to continue suckling for thirty months.

Definite prescriptions have been revealed in the Holy Quran with respect to the kind of food that can be eaten by the believers. While all good things can be eaten, we are forbidden to consume blood, carcases of animals and flesh of swine. And this is the teaching of the one hundred seventy two and seventy three verses of Surah 'Al-Baqarah'. How harmful such food could be is easily realized when we find that a number of parasites live in blood and disease producing microorganisms thrive in the dead and decomposing organic matter. Pork is not only rich in cholestrol but contains helminth parasites like \textit{Trichinella spiralis} and
Echinostoma malayanum which cause intestinal disturbances.

The meat of sheep, goats and cattle, contains proteins, iron and phosphorous in health-giving quantities while that of camel provides the much needed salts to people living in the tropics and suffering from cramps because of the loss of sodium chloride through perspiration.

The food prescriptions of the Holy Quran have been further explained in Hadith. Fishes and locusts are treated as pre-slaughtered animals and provide the eater with considerable energy. This could be the reason that muslim could fight several battles even though locusts were the only food available to them on such occasions.

The manner of slaughtering with the aim of draining off all the blood and to give the animal the least possible pain is indeed a great teaching of Islam. It not only saves us from certain blood diseases, but also enables us to retain the meal for a longer time and to tane the skin in a better way and obtain commercial gains.

Milk is a complete food. A female cattle, through proper selection, can be made to produce milk much in excess to the requirements of her young ones and this can be consumed by us. Indeed Allah gives us pure and pleasant milk from the bellies of the cattle. This is the lesson for the wise in the sixty sixth verse of Surah 'Al-Nahl'.

The biologist can give a correct explanation of the sixty
eight and sixty ninth verses of Surah 'Al-Nahl'. The bees are hard working insects and through an intricate process of digestion ripening and dehydration convert the nectar of flowers into honey which is not only an excellent food but also a medicine. One pound of honey contains 1.82 grams of proteins and 324 grams of carbohydrates besides calcium, iron and phosphorous. It is unique in the sense that it can be directly assimilated into the blood stream. Our Holy Prophet (may the peace and blessings of Allah be on him) prescribed honey in cases of stomach ailments and advised the Ummah that its use would bring them health and happiness.

Quadrupeds are indeed our treasured possession and play a significant role in every day life of a human being. They guard our agricultural farms, residential buildings and provide us with articles of commerce such as the wool, hide and skin. Through domestication even the most savage and ill tempered camel can be made a ship of the desert. It can carry our heavy loads over long distances across the deserts and this is because of its endurance to thirst for three to four days. No doubt therefore, that quadrupeds are real supports to our life and this is the lesson which has been given to us in the fifth verse of Surah Al-Nahl.

The sea is a treasure of wealth. Besides capturing fish for food, we obtain pearls from it. These are certainly a bounty of God as we make from them expensive ornaments. Similarly sponges collected from the sea are of considerable economic importance.
and are used for cleaning wounds, washing floors and making garments.

But all animals are not useful. There are destructive ones also. Tiny repulsive and seemingly inferior insects give us typhus, dermatitis and other diseases and ruin our crops. These have to be destroyed. This is why we can kill injurious animals like the lice, rats and rabid dogs even while performing 'Haj'. But let it be clearly understood that Islam does not permit its followers to kill all kinds of animals. In fact kindness to animals is a fundamental teaching of the Holy Quran. Verily, Allah loveth those who are kind and do good work (Al-Baqarah : 195). Our Holy Prophet (may the peace and blessings of Allah be on him) has also remarked that any good deed in respect of an animal would be rewarded by the Almighty Allah.

That the growth of plants which are the ultimate source of food for the mankind is mainly dependent on rain, is an important teaching given to us in the hundredth verse of Surah Al-Anam. Of the various fruits which have found mention in the Holy Quran, dates are very significant and this could be due to the fact that these are easy to assimilate and serve as a tonic for the heart and the eyes. The culinary value of vinegar which can be obtained from grapes, barley or apples has been much emphasized in the Hadith. Thus unlike Alcohol which intoxicates and is fatal to all forms of life, vinegar which is obtained through bacterial action on alcohol, is a highly rejuvenating diet. It has also some medicinal value and can be used as a substitute for
eggs in baking industry.

Figs, pumpkins and cucumbers can be easily grown and provide us with stable, cheap and nutritive diet. This could be the reason that the Holy Prophet (may the peace and blessings of Allah be on him) advised the Ummah to eat the rejuvenating pumpkin curry and cucumber with fresh dates.

Plants are of great medicinal value so much so that the Holy Prophet (may the peace and blessings of Allah be on him) once remarked that if anything could save us from death, it would have been 'Senna', a plant belonging to the species Cassia angustifolia.

The last part of the thesis is devoted to the study of personal and community hygiene. Keeping oneself clean is a fundamental principle of the Holy Quran for Allah loveth those who shun pollution. And this is the reason that no one can embrace Islam without taking a bath, performing wudhu and wearing clean clothes. The law of wudhu is certainly an important step towards personal hygiene. Indeed much emphasis has been given to dental hygiene in Islam. Circumcision prevents inflammation of glands and foreskin and saves us from the cancer of prostate.

Dress is the index of a person. Besides protecting him from the extremes of climate it also indicates his manners. A loose fitting 'kurta' which was the preferred dress of the Holy Prophet (may the peace and blessings of Allah be on him) amounts to wearing an additional garment for the maintenance of body heat.
We have been told to avoid wearing garments of silk but when needed, as in the case of persons suffering from dermatitis, such a dress can be worn.

Sleep is essential for human health. It restores physical and mental alertness and keeps us free from strain and stress. This is the teaching that has been given to us in the ninth verse of Surah Al-Naba.

The Holy Quran clearly advises us that we should not contribute to our destruction because Allah never forgives people who indulge in excesses and interfere in the phenomena of nature. The destruction of a people is not an arbitrary punishment from Allah but the people try it on themselves. The decree of Allah is always made known to the people before any calamity falls on them. The truth of these teachings become clear when we study the causes and extent of the present day environmental crisis. Due to continuous exploitation, man has made the air increasingly unfit to breath and the waters of the lakes and rivers unfit to drink. We must clearly understand that Allah never permits any interference in His scheme of things. He has framed rules and disobedience means disaster. Urbanization, industrialization and increased agricultural production, though advantageous in certain ways have also brought about contamination of the environment. For example a power station burning 5000 tons of coal per day, may release as much as 200 tons of sulphur dioxide per day and this causes acute irritation of the skin, eyes and the respiratory tract. Leaf tissues are damaged and photo-synthetic activity
essential for all life on this earth is retarded. This is how the web of life is disturbed and our very existence on this planet is threatened. Muslim Scientists were quick to realize the gravity of the situation and Ibn Rubban described the harmful effects of chemical toxicants on human health and welfare as early as 850 A.D. One of the most ingenious experiments of all times was performed by Al-Razi when he decided to select a place for the construction of a hospital in Baghdad by hanging pieces of meat at various places and selected the site where these were slowest in showing signs of decomposition. The Holy Prophet (may the peace and blessings of Allah be on him) saved the people from the epidemics of plague by promulgating a quarantine prohibiting the entry and exit of people from a place where plague epidemic was prevailing. Of course this was done centuries before the western world became aware of the fundamentals of preventive medicine.

Such is the nature of the present study. The author has attempted to apply the relevance of Islam to the Science of Biology and to show that what human endeavour has achieved after centuries of experimentation and research was taught to us in clear and simple language during the seventh century A.D. And this was because of the fact that Al'Quran has not been revealed for a particular occasion but for all times.