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# Plant genetic analysis of the Quran

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#### ABSTRACT

Background: Over fourteen century has been passed from Quran descending. It should be claimed that most Quran contents are perceived in the light of scientific development and human knowledge due to passing time, however. Objective: Genetics, plants general fertilization and how the plants are fertilized all include the same essential issues and human fundamental mysteries which regarding to the innovative sense of botanic and medical plant science, the Highly God pointed it out over and over who stated: "we have created the plants in couple". God claimed these important facts and He revealed the great mystery of knowledge in Quran from which the people around the world were unaware and some of this scientific knowledge featured after passing several centuries and with respect to human scientific developments. Results: It is worth noting that thinking about these issues, it can be found out that discovering natural mysterious knowledge is considered as Quran the holy criteria and features in which based in Quran, the highly God has invited the thinkers to think about creation system. Writers made great efforts to study Quran verses and investigate various perspectives of Shi't and Sunni interpreters using library methods, record and describe investigated data based on their own scientific capabilities making use of innovative perspective. Conclusion: They would like to obtain Quran outstanding miracle in plant genetic knowledge with respect to new subjects and results.

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## INTRODUCTION

The holy Quran is the guide book to lead human beings toward God the most high which made use of various reasoning methods, the word of advice (sermon) and debates in a good manner and also scientific signs in the line with its leadership purposes. it has been pointed out more than a thousand verses to scientific subjects in the book among which some has been considered Quran's scientific miracle. Hence, there exists ample verses associated with plants and related issues which sketches the importance of the mentioned subject. The plants which have been named in Quran attached a lot of importance to their usages and properties and also regarding to featuring every event and occurrence accompanied with the name of the plant. Since the name of the plant mixed with the words of Allah, it manifests precious and importance to some sort.

Quran pushed human beings to pay special attention to the importance and the worth of natural resources in their lives since fourteen years ago. God encouraged human to agriculture in various verses and reprimanded them in front of each deterioration. This eternal word, for the first time, pointed out to the role of winds blow and their varieties in agriculture and farming. In the other word, Quran is the first book which has considered climatic information and atmospheric variations importance in agriculture (Mustansir, 2006).

insemination of each male and female creature fruits when it is generative and its generation depends on the intercourse between two sexes. The intercourse of one kind differs from another, however. Plant intercourse is done by pollination and the clouds by striking positive and negative charges and the animals and human beings frequently intercourse by carrying sperm observing different ways (Isfahani, 2004).

during long ago even prior to advent of Islam, human was aware of plant pollination, Not only did Quran point out to the above mentioned subject, but also pointed out to all creatures parity and no one was aware till recent century (Haman, 277 - 282). The Holy Quran has revealed the mystery of the creations in various verses to inform human beings and to encourage them to think about creation system. The God stated these important facts when all nations around the world were unaware of them. Passing many centuries, some of these facts and scientific signs were revealed following the development of knowledge and human sciences. This has also been accounted among the privileges of the book.

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the all know God also shed lights on one of the creation mysteries and stated about suitable and certain combinations of plants that" which means that "we created the earth and set solid mountains on the earth and grew every suitable thing on it". It has been noted to suitable and certain combinations of plants in this verse which is one of the precise mysteries of the world creation (Khoee, 1979, 114). He highlights the most essential element in human and animal lives - plants - and states that "we grew everything (plant) on the earth in perfect harmony on the earth planet perhaps there are a hundred thousands of plant lives containing various features and different effects which opens a new door to the recognition of Allah and each small part reveals enormous power of the God's cognition (sample interpretation, 1994, 61).

The concept of coupling / parity in Quran:

it has been proved in agricultural science that the plants generate and increase in different ways. the most essential ways to note are as follow:

- 1. planting seed
- 2. planting root
- 3. planting stem
- 4. laying branch
- 5. germinating
- 6. Grafting

The main aim of the science has been to increase the number of plants, maintaining their valuable features. to attain this, the plants are generated sexually and asexually. Mostly in nature, the plants are generated by seeding. Each seed has genetically unique structure which is obtained from parents' fusion.

In order to have successful plant generation by human, three various aspects should be taken into account which are as follow: firstly; having scientific information and necessary skills to increase the number of plants including seeding, sapling and transplanting, grafting, propagating, and rooting which are among the skills of increasing the number. Secondly; having necessary information about growing structure of the plants and their growing conditions which has been considered the science of plant increase and thirdly; having sufficient information about the methods of increasing various plant species.



Couple has literally been meant double and also meant sort or type. in the latter case Raagheb says that "  $\cdot$ 

Couple (parity) is said to each of the animal's male or female, also to every is said couple. then he writes that the Highly God stated this concept in the verse.

That all the thing has been collected in the comparative world or in the world contradiction to Him

Quran has pointed out the fact that the plants are male and female.

are considered the couple (even). Because either it had a contradiction or it fused with something else which the fusion itself is a kind of couple. Since there is nothing in the world which no fusion is seen in it (Hoveizi, Mosheh, 1996, 130).

Ayat-o- allah Makarem- E-Shirazi pointed out to this holy verse about the concept of coupling /parity .and stated that: what the meaning of "couplings " / parityis here, the interpreters have different ideas. what seems obvious is that the term " couplings " is the plural of "couple " and is referred to both male and female sexes, whether in animal world or in the other worlds, then the term has meaningfully been developed and to each creature which live with each other or contradicts with each other is referred to as " couple ".

However it is not unlikely that "the coupling "/ parity phenomenon has been used in its specific meaning that is "male" or "female". in this verse, the Holy Quran elucidates the presence of coupling /parity in all plant life, human and other animal lives which people are not aware of (Makarem- E-Shirazi, 1994, 378).

These creatures which have been interpreted to "couples", may be plants that we clearly know that the width of coupling domain, in that day, has not been discovered yet and even the knowledge of botany and medical plants have not been erected yet and these sciences are innovative. Either it pointed out to deep deep ocean and sea animals which no one was aware of and today part of it is revealed for human beings, or it pointed out to other creatures which live in other planets in which today's knowledge makes an effort to solve the mystery of life in these places.

there could be imperceptible creatures or even microscopic, which scientists today, did not find male or female in them, but the world of these tiny creatures covered with much mysteries that human knowledge may have not been routed to this part so far. Even the presence of "coupling" / parity in plants world in the line of Quran descending has been unknown except for palm tree and the like, and Quran revealed it, and in the recent centuries, this subject has been proved that the phenomenon of coupling in plants is general and widespread.

This seems probable that "coupling" /parity in this case referred to the presence of positive and negative particles in the heart of all atoms since we know that all objects in the world is made of " atom" and the atom looks like a brick for huge construction of substantive world.

Until the atom has not been scrutinized, nothing revealed about this coupling, but afterward the presence of positive and negative (charges) couples in the core of atom and the electrons spinning around were proved. some intellectuals referred to the combination of objects out of "material" and "image", or "substance" and "accident", and some others implied to the "species and various kinds" of plants, human, animals and other creatures in the world.

As a result, it could be stated that this verse illuminates the limited capacity of human knowledge and demonstrates that there are much more facts in the world we are unaware of (Haman, exploited and summarized; Hatit, 2005, 137 - 138).

in fact atom can be regarded as a couple creature and it can be concluded by generalizing coupling in atoms that material world has basically been established on coupling and no one creature make a exception out of this general principle (Sadaat, 1978, 39 - 43).

in the mid eighteenth century AD. a famous Swiss botanist named "Lineh" publicized these issues for the first time that coupling (male and female) has been considered general in plants world and the plants are fertilized via intercourse of male sperm and female ovule as most animals, and then produce fruit. but the Holy Quran had revealed this fact twelve years prior than that scientist did and had pointed out to various cases of coupling in the plant world (Sobhani,). Which means that: "we fertilized (electrically charged) the winds and sent them, via them we descended water from the sky (rains) and satiated you by that water but you are not a good treasurer". The Highly God created the plants and animals in couples and pushed His creatures (human) to make living by the fruit made due to coupling and reproduction of male and female. There is no creature in the world which is out of this knowledge..

However the statement refers to the meaning that the God is superior than coupling, varieties, duality and partnership and the mentioned adjective deserve the creatures. Since the God is unique and He is the creator of everything (Hoveizi, Mosheh,1996, 130). Therefore He pointed out to "the reproduction and generation of plants" in Yasin sureh verse 36 and He states about coupling / parity that:

that means "He is pure and superior the One who created all couples, from which the earth grows and from their own, and from what they are unaware" (Nemoneh Interpretation, 1995, 94). this verse covers one of those verses which states the limitedness of human knowledge and demonstrates that there are many facts in this world including - "coupling / parity " in the world's creatures - which blurs the line of our knowledge and science. it is perceivable that the plants have various methods of coupling / parity and fertilization, in most of them the male and female placed on one base, and in the others the males and females pose on different bases.

1) it seems that the above mentioned verses can be classified as follows:

sometimes, The Quran talks about fruit coupling  $\slash\,$  parity.

in the next step, It talks about plants coupling / parity.

then It talks about the coupling / parity of the things that human do not know anything.

finally it talks about the coupling /parity of all objects in the world.

- 2) the ultimate aim in stating coupling /parity is to mention God's signs and challenging the thought of human.
  - 3) the term couple / parity literally means as follows;

- I. to each male or female which symmetrically complete each other is called couple in animals.
- II. to every kind of things which symmetrically completes the other is called in non animals.
- III. to each thing which coincides the other and looks like it is called couple (Rezaii, Isfahani, 2004, 278).
- IV. to each thing which coincides the other and opposes it is called couple (Raagheb, Isfahani, 1953).

those who considered coupling / parity verse with the mentioned meanings which believe on that each kind of biological creature has male and female, that is, there is no biological creature whether animals or plants that do not have male and female. sometimes, it is probable that someone states that it is not acceptable in biology today, but something contradictory occurs, say, there exist various types of biological creatures which do not contain male and female (Malekian, 1994).

it is necessary to point out to two subject in order to clarify the issue:

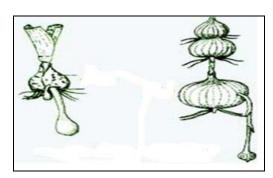
Firstly, among verses related to coupling / parity, some stated the coupling of fruits (Raad, 3), and some mentioned the coupling of plants, and some referred to the coupling / parity of all creatures: which means " we created two kinds of everything.

Secondly, parthenogenesis phenomenon flow among protozoa which is better to find out information about these creatures and the way they proliferate:

It means the unicellular animal which are among the lowest levels of animal hierarchy, - protozoa - which contain specific and complete core (Unicellular), their bodies are just made of one cell which is encompassed with the core membrane. up until now, more than three thousand types has been recognized. majority of them live freely on the land and seas and some are English.

the size of them range between  $1\mu$  to  $150\mu$  and some of them can be seen by naked eye. the proliferation of protozoa types as: ciliaphora, mastigophora, and.....are classified in three (Rezaii, Isfahani, 2004, 284).

- a. asexual division includes several forms:
- 1. binary division in which unicellular mother is divided into two unicellular daughters and in Ciliaphora , this division is transverse.
- 2. schizogony or multi proliferation, in which the core of mother repeatedly divides in several daughter core and then cytoplasm is created and covers around the core.
- 3. following germination after the complete growth of the cell, the resistance of membrane decreases in a point and leads to germination formation and an small amount of mother core and cytoplasm enters it and grows till to be separated from the mother begin an independent life.
  - 4. these three sorts of division are included among parthenogenesis.



- b. there are various forms of sexual proliferation which are visible in Ciliaphora.
- 1. following fusion in this method, two unicellular are coupled altogether then the core content of the two exchange with each other, then they will be separated as the unicellular whose cores has reorganized.
  - 2. Sangamy of two male and female sex cells named Gamete join together and form an ovule.
- 3. sprogony originally is created inside and unicellular cyst generates plenty of sporozoa, that following some stages, sexual cells are generated which will be coupled via sangamy (Davarmazdi, 1993, 37 46).

Investigating the contradiction between coupling /parity and parthenogenesis:

- 1. as it was mentioned before, the term "couple" literally has been used to name one of the two things which are symmetrical or simultaneous to each other, similar or apposite to each other (Makarem, 1994, 377 378, 376). therefore it can be defined that the meaning of the term "couple' is exclusive in "male and female". thus in unicellular which cell division takes place and become two, two couples are generated, Hence, the cover the term "couple"; because out of each one two similar and simultaneous things are created.
- 2. regarding to the general coupling / parity of the objects issue, coincidence or concurrence and coplacement every two couple is not the criteria, Hence it is possible to have two couples in two places( as electron and proton which are in the outer ring of atom and orbit around it)or in two periods of time.
- 3. the main problem which has led to the attitude of contradiction between Quran general coupling / parity principle in creatures with parthenogenesis issue is that some thought that the term " couple" always

means male and female. while the term "couple" is general and covers all the things which are similar, coincidence, or opposite. therefore, there is no contradiction between Quran verses about general coupling / parity principle and parthenogenesis issue (Rezaii Isfahani, 2004, 286).

#### *The role of Winds in plant fertilization:*

How the plants are fertilized, its factors and the role of wind in plants fertilization have long been among the fundamental mysteries of human beings and the scientists spent a long time to discover these mysteries, Quran had revealed these scientific facts with a loud voice fifteen centuries ago and called the intellectuals for thinking about the creation system: the Holy verse from Hajar 22 points out to the essential effects of winds and the fact the winds play a fundamental role in creating the rain.

which means that" we sent the winds fertilizer (of plants and clouds); and we sent water from the sky (rain) and we satiated you; while you are not its reservoir'.

is the plural form of which means fertilizer, and here it points out to the winds which link the fractions of clouds and make them prepared for rain. although some contemporary scientists tend to consider this verse as a point to plant fertilization via winds and pollination, and following it, they interpret one of the scientific issues which no one in the human communities pay special attention to it during Quran descending era, but with respect to accepting the fact that winds blow have a profound effect on carrying pollin- of male sperm and fertilizing plants, the above mentioned verse cannot point out to it.

because following this word, immediately comes the descending rain from the sky which is followed by " which demonstrates that wind fertilization is a preface to rain descending. it also pictured the role of winds in electrical discharge among clouds carrying rain and their effect on plants fertilization, which have been pointed out in the following verse. some researchers believed that the Holy verse states that .

(Raad, 3) "He placed from every products, a pair of couple in it" (Jalali, 2010).

Rezaii Isfahani M. R., mentions in this case that: some stated in the interpretation of the verse in question that: it means the winds which deliver male plant pollin to female plant pollin and make them fertilized, this verse is considered the scientific miracle of Quran. another interpretation is that the verse illuminates clouds fertilization and their insemination, since the rest of the verse which points out to the rain descending issue, results in cloud insemination. Ahmad Amin considered this verse an eternal miracle, because its meaning covers the effects which the wind establishes on positive and negative electricity union in two fractions of clouds and their fertilization and insemination.

some others think that the verse, in fact, can elucidate both fertilization of plants and clouds, scince the first part of the verse states something general (winds fertilization power) which is generalized to clouds and plants fertilization; but as it continues, the verse in fact reminds one of the results obtained out of this fertilization which is the same descending rain from cloud (Rezaii Isfahani, 2004, 291, Hamoo, 1996, 426-428).

#### *The Role Of Water in Plant insemination:*

As it was referred, the plants do not have the possibility of growth and fruit without insemination between male and female. This insemination has been carried out in various ways and using different instruments, and the water is among the instruments used in insemination between male and female (Tazehkam, 2000, 42). the Highly God states in the Younes Sureh, verse 24 that:

"Hence the story is about the water which we have sent from

sky (rain) and the soil flora....".

there exist three well - known interpretations about the advent of all living creatures out of water in the 30th verse of Anbia Sureh as follows which states:

- the water is the source of creating creatures.
- the life of all living creatures plants and animals depends upon water; the water whose main source is the rain God descended from the sky.
  - the term «مام» pointes out to the sperm drop water which usually living creatures are created by.

it is wonderful that scientists believe that the rudimentary living germination has been found spring of life, and if Quran regards the creation of human out of soil, we should not forget that the soil means which is combination of soil and water (Makarem Shirazi, 1994, 396).

investigation: if we accept the third possibility in the verse, the verse does not stand for scientific miracle and the scientific miracle of Quran is not definite in this verse (Jallali, 2010, 174).

## Conclusion:

The natural science has been covered in the layers of verses in Holy Quran as one of dimensions of scientific miracles in Quran and these points do not damage the teachings context of Quran. since this miracle is unique to Him who is the Great Speaker who transmits His words to His believers and His creatures bow and bent in front of Him considering developments in various science. it is the truth that study and reflection in natural world creatures, leads us to metaphysics and the way continues to metaphysics and ends there. studying

the outstanding system of creation, we conclude that the nature is defeated by the power which is single, unique, manager, director and widespread which is comprehensive. He has all perfection attributes and is free from all deficiencies and imperfections, because His creation is based on Justice.

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