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Darwinian classification of plant and animal (taxonomical evidences) opposite to Darwin's theory

Md. Abdul Ahad**Abstract**

The objective of this article to prove "Darwinian classification of plant and animal (taxonomical evidences) opposite to Darwin's theory" and it is a true fact: because diverse literature confirmed that Darwinian classifications/evolutionary classifications of both in plant and in animal kingdom are absent. However, in plant kingdom, Darwinian classifications systems of Hutchinson, Engler and Prantl, Bessy, Eichler, Takhtajan etc. are not valid as evolutionary classification; as those classifications are based on assumption, modification and similar to Bentham and Hooker's classifications (non-evolutionary classifications). Again, fossils are the direct evidences of Darwin's theory. But those classifications are not based on fossils as the fossils of angiosperm provide little help to taxonomists in separating the concept of evolutionary origin and diversification. Furthermore, various journalisms are demanded the absence of Darwinian classification in the animal kingdom. Additionally, the naming (the goal of taxonomy) of both plants and animals are completed by Linnaeus's "Rules and Laws", but not evolutionary rule.

Keywords: Darwinian classifications, Evolution, phylogeny, taxonomical evidence

1. Introduction

Evolution suggests that life arose by the natural process from non-living materials and achieved its present diversities including man^[1]. Darwin defined evolution as the descent with modifications through the natural selection from a few common ancestors^[2]. According to Darwin-human and other organisms evolved in this way→ unicellular organism → invertebrate→ lung fish→ amphibian→ reptile→ placental mammal→ higher mammal→ human^[3-7]. However, there are some evidences, which support the doctrine of evolution. These evidences are drawn from many areas of biology^[8]. In the "Origin of Species" Darwin critically and masterly summarised the evidences of evolution and these have been enlarged since his time^[9]. These evidences have overwhelming convinced the biologists about the validity of the evolutionary theory- taxonomical evidences (classification of plants and animals) are the one of them^[10]. Darwin pointed out that "from the first dawn of life, all organic beings are resembled each other in descending degrees, so that they can be classed in groups under groups. This classification is evidently not arbitrary like the grouping of the stars in constellations^[2]". All biologists use taxonomic information in their research. They attempt an organism to place into a group^[11]. The actual practice of classifying is usually called taxonomy or systematics^[12]. There are many Darwinian/evolutionary classifications systems of plants such as Engler and Prantl systems, Hutchison systems, Bessy systems, Eichler systems, Hallier systems, Thorne systems, Takhtajan systems, Dahlgren systems, Cronquist systems etc; but the modern classifications of Bentham and Hooker is not evolutionary basis classifications^[13, 14].

In opposition, phylogenetic taxonomy has seen some inherent problem. Even, if one can work out about the true evolutionary history of a group of organism, no taxonomist can classify than a way that everyone accepts it^[15]. Taxonomy can never indicate evolution exactly^[16] Many of the modern evolutionary classifications have more in similar with the Bentham and Hooker^[17]. An ideal phylogenetic system, however, not yet arrived^[18]. Thus, there is a doubt and contradiction about Darwinian classification. So, it needs to remove the uncertainty and contradiction from the taxonomy for the benefit of modern biological science.

Again, artificial selection/hybridization (the main force of evolution) is opposite to Darwin's

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Theory Ahad ^[7]. But the review of literature reveals that there is no such type of article as “Darwinian classification of plant and animal (taxonomical evidences) opposite to Darwin’s theory”.

Therefore, this article aims to prove “Darwinian classification of plant and animal (taxonomical evidences) opposite to Darwin’s theory”. Working on the above objectives is essential. This article would be beneficial to the student of taxonomy and taxonomic researcher as well as who studies on evolution.

2. Darwinian classifications/evolutionary classifications of plant of Hutchinson, Engler and Prantl and other classifications systems are not valid as evolutionary classifications:

Darwinian classifications are opposite to Darwin’s theory as claimed Darwinian classifications such as Hutchinson classifications, Engler and Prantl classifications etc. of the plants are based on assumption, modification as well as similar to Bentham and Hooker classifications (non-Darwinian). Even those classifications are not based on fossil record and its documents are placed in various subheading-

a. Bentham and Hooker system is not Darwinian- de Candole’s system is not Darwinian at all. Bentham and Hooker system was directly patterned on that of de Candole’s system ^[13]. So, Bentham-Hooker’s system is not phylogentic at all, since it is based on single characters and nothing has been said about dicot and monocot ^[19].

b. Darwinian/evolutionary classifications systems of Hutchinson systems, Bessy system, Eichler’s system and Engler and Prantl are similar to as well as modification of Bentham and Hooker’s system-

i) Darwinian classification of Hutchinson is closer to Bentham and Hooker’s system ^[14]. Bessy’s systems are marked similar to Bentham and Hooker’s system ^[13], Hutchinson principle of classification somewhat similar/parallel to Bessey’s classification ^[21] –the chief features of Eichler’s system were adopted by Engler in collaboration Prantl ^[19], with some modification. Engler never considered his system to be phylogenetic ^[21]. Also, phylogentic system of Eichler was not a phylogentic system in the modern sense ^[13].

ii) The above statement confirmed that Hutchinson systems, Bessy’s systems, Eichler’s system and Engler and Prantl systems are not phylogentic system as those systems are more or less similar to Bentham and Hooker’s system.

iii) Engler and Prantl and Hutchinson systems have minor differences with Bentham and Hooker’s system:

a. Number of families: In Bentham and Hooker’s system, the numbers of families are 202; where as in Engler and Prantl’s system, the numbers of families are 280; but in Hutchinson’s system the numbers of families are 402.

b. Placing of taxa before or later such as orders, classes and families:

In Bentham and Hooker’s system, Gymnosperms are placed in between dicots and monocots; the family Composite is placed at the beginning of Gamopetalae under Asterales. Again, Gramineae is considered as a most advanced family; placed at the end of monocots under the series Glumaceae. But in Engler and Prantl’s system, gymnosperms are placed before angiosperms i.e. before monocots. Composite is placed at the end of Dicotyledonae under the last order Companupalatae of Sympetalae; whereas in Hutchinson’s system,

Gymnosperms are places before angiosperms, i.e. dicots. Compositae is placed under herbaceous under the order (2nd one) Asterales and Gramineae is given the highest place as the last family, under the Giumiflorae ^[13 and 20]. Therefore, the main difference between Engler and Prantl’s system with that of Bentham and Hooker is the amalgamation of Polypetalae and Monoclamydeae ^[19].

This is proved that Engler and Prantl, Hutchinson systems are not Darwinian, as they differ from Bentham and Hooker system by a number of families and placing of the family before or after and amalgamation of Polypetalae and Monoclamydeae.

So, Hutchinson systems, Engler and Prantl’s system are more or less similar Bentham and Hooker system. Thus those systems are not Darwinian systems.

Again, Hutchinson’s system has provided a sound basis for the later Darwinian systems of Tippo, Cronquist, Takhtajan and other ^[21].

So, it is proved that Hutchinson’s system systems are not Darwinian. Consequently, systems of Tippo, Cronquist, Takhtajan and other are not Darwinian.

c. Hutchinson systems and Engler and Prantl systems are based on assumptions/believe only-

i. Engler and Prantl’s system is based on the believe/assumption (not observation/practical) that the absence of perianth of angiosperm is a primitive features; hence families having perianthless and unisexual flower are regarded as primitive and are placed before the families having perianth and bisexual flowers. Whereas, the Hutchinson’s system based on the assumption that plants with sepals and petals associated with other primitive floral are more ancient phylogenetically than a flower with sepals and petals free floral are regarded as primitive and connate parts as more recent ^[20]. As a result, the system of Engler and Prantl’s has been subjected to heavy criticism as tending to obscure the phylogeny of the angiosperm ^[19].

Thus, Engler and Prantl’s system and Hutchinson’s system are assumptions/believe only (but not based on fossil records or observation). Assumptions are one kind believe but “believe is not science as believe in God is not science ^{[3]”.}

Hence, Hutchinson systems and Engler and Prantl’s systems are not valid as Darwinian or evolutionary classification systems.

d. All modern Darwinian classifications are not based on fossils records-

Darwin ^[2] declared: “he, who rejects these views on the nature of geological record (fossil), would rightly reject his whole theory” (Origin of Species, p.276). Thus, the fossils are the main evidence of Darwin’s theory ^[22]. But it is documented that the fossil record of angiosperm provides little help to taxonomists in separating the concept of evolutionary origin and diversification. Phylogeny of incorrectly interpreted in the absence of known evolutionary sequence based on little fragmentary fossil ^[23]. A recent investigation of fossils does not lend support to Engler’ and Prantl’s system ^[19]. So, post-Darwinian system of classifications is not based on evolutionary relationship, but claimed to be evolutionary ^[17]. In addition, the phylogenetic classifications proposed after Darwin’s theory, are mostly claimed to be phylogenetic but not true phylogenetic classifications ^[21]. Thus, based on above declaration it could be concluded

that all Darwinian/evolutionary classifications systems (i.e. claimed Darwinian classifications systems of Engler and Prantl, Hutchison, Bessy, Eichler, Hallier, Thorne, Takhtajan, Dahlgren, Cronquist systems etc.) are not Darwinian classifications but claimed as Darwinian/evolutionary.

3. Various literature demanded absence of Darwinian classification both in plant and in animal kingdom

Numerous literature demanded that absence of Darwinian classification both of plant and in the animal kingdom. Because both plant and animal are classified according to Linnaean system and this classification still exists in the taxonomical world, even classification of microorganism. The documents are placed here:

- i. In general, the classifications schemes are Linnaean, which constructed from the phenotype similarities, all which may be observed ^[24]. As a result, the present classification system of animals and plants arrange species into higher groupings (species, genus, family, order, class and phylum) that are proposed by Linnaeus ^[25]. So, biologists still use the Linnaeus' classification system for plants and animals ^[26]. According to World Book Encyclopedia of Science' plants and animals are classified according to the botanist Carolus Linnaeus ^[27]. The above literature verified that both plants and animals are classified according to Linnaeus' system.
- ii. Linnaeus in the tenth edition of "Systema Naturae" listed 4236 different scientific names for animals. Since these names represented a large spectrum of forms, shapes, and sizes of animals, he adopted a system of grouping similar genera together as orders, and grouped similar order as classes. He grouped all of the classes of animals together as members of the animal kingdom, as distinct from the plant kingdom ^[28]. Hence, it is again documented that in modern times naming as well as animals are classified according to Linnaeus' system.
- iii. Linnaeus adopted a nine order classification of insect such as Aptera, Orthoptera, Neuroptera, Hymenoptera, Coleoptera, Lepidoptera, Diptera, Thysanoptera and Hemiptera. These orders are large and most of the insect belong to these orders and still unmodified. However, modern entomologists have added to its some minor orders but very few insect belong to it. Even maximum scientific name of insect and other animal is specified by Linnaeus ^[29]. Hence, it is documented that insects are classified according to Linnaeus' system, i.e. non-Darwinian classification.
- iv. Many taxonomists support the organization of a vast number of organisms on earth by grouping those with similar characteristics and comparative morphology through Linnaean system of classification of the five kingdoms such as Monera, Protista, Fungi, Plants and Animals ^[30]. The above statement of Wallace indicates that not only plants and animals but also microorganisms are classified according to Linnaeus' system.
- v. It has been demonstrated that classification of maximum information content are those in which the taxa recognized are the result of evolution. Such classification is presented as a hierarchy. In taxonomy, this hierarchy is referred to as a Linnaean hierarchy such as class, order, family genus and species ^[12]. Hickman ^[22], Stanley and

Andrykovitch ^[31] and Purves and Orians ^[32] have mentioned as examples of classification of animal: Phylum Chordata, Subphylum: Vertebrata, Class: Mammalia, Order: Primates, Family: Homonidae, Genus: Homo, Species: *Homo Sapiens*.

Above literature proved that evolutionary classification means Linnaeus's classification and animals are classified according to Linnaeus' system.

- vi. Pre-Darwinian biologists were able to develop taxonomy to classify the living organisms that was useful, which was based on their morphology, principally the comparative anatomy of adults without giving any importance of evolutionary relationship ^[33]. World famous three taxonomists, E. Mayr, E.G Linsley and R.L. Usinger declared that taxonomic classification is existed before the theory of evolution was accepted by biologists, and even today it may be pursued without regard to phylogeny classification and in dominated taxonomy for the next century, and most of the essentials of Linnaean method are still components of modern taxonomy ^[26]. Literature of Case and Mayr *et al.* strongly supports that past and present classifications of plants and animal is non-evolutionary (i.e. Linnaean) and it would be dominated for the next century. Subsequently, it would be again declared that classification systems of Engler and Prantl, Hutchison, Bessy, Eichler, Hallier, Thorne, Takhtajan, Dahlgren, Cronquist etc. are not Darwinian classification but claimed as a Darwinian or evolutionary classification.

4. Linnaean Linnaeus' rules of binomial nomenclature (the goal of taxonomy) is universally employed throughout the taxonomical world

One of the principal goals of taxonomy is the naming of organisms ^[8, 13, 14]. The proper naming of living organism is the province of the science of taxonomy ^[16]. So, the naming of living organism is occupied the entire taxonomy/classification.

Numerous recent literature support that Linnaeus' binomial nomenclature (formulation for the scientific name of every species) are universally employed throughout the taxonomy:

- ii. Taxonomy aims to tag a name to every species of animal in the animal kingdom. Since species name is a universal name. Linnaeus early adopted the case of two names for each species: the genus name and the species name-called binomial ^[22]; so, the Linnaean system of classification each distinct kind of animals receives to names which together constitute the scientific name of the species ^[34]. This Linnaean system of classification (binomial nomenclature) is universally accepted and employed throughout the biological world ^[26, 21 and 35]. In addition, Linnaeus's 'Rules and Laws of nomenclature' were chosen as starting points for the 'Botanical and Zoological Nomenclature' for valid names ^[26]. Above literature indicate that Linnaeus's "Rules and Laws" of nomenclature' for naming of organism is occupied the entire taxonomy; but not Darwinian/evolutionary rule. So, the major part of taxonomy/classification is non- evolutionary.

5. Fathers of taxonomists (whose classification systems are still universally used) did not believe in evolution, which also support absence of Darwinian classifications

Fathers of taxonomists (whose classification systems are still

universally used) did not believe in evolution, which also supports the absence of Darwinian classifications and writings are placed here:

- i. The Swedish Naturalist Carolus Linnaeus (1707-1778), the father (also the father of binomial system) of classification/taxonomy, was strongly anti-evolutionists and believed in the fixity of the species [22]. He (Linnaeus) defended the idea of the persistence of the species so vigorously, which was a problem long after words to the establishment of modern evolutionary theory [32].
- ii. John Ray (1627-1705), another founder of modern taxonomy, believes in the unchanging of the species. According to him, animals and plants are wonderful fragments of machine and their parts work harmoniously like parts of a man made instrument and so they must be of an intelligent maker wonderful than that of man. He published his viewpoint in the book 'The Wisdom of God in the works of Creation' [36].

6. Conclusion

An evolutionary classification of animal is entirely absent in taxonomy. Though classifications systems of the plant of Hutchinson, Engler and Prantl, Bessy, Eichler, Hallier, Tippon, Thorne, Takhtajan etc. claimed as Darwinian classifications—those are classifications are not valid Darwinian classifications.

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https://www.researchgate.net/profile/Daniel_Buss Buss (Pan American Health Organization), v) James L Carter (United States Geological Survey), vi) Marcus W Feldman (Stanford University), vii) Richard [HYPERLINK "https://www.researchgate.net/profile/Richard_Buggs"](https://www.researchgate.net/profile/Richard_Buggs)Buggs (Queen Mary, University of London), viii) Rachel-Ann D. Charles (Birmingham City University), ix) Il-Kwon Park (Seoul National University). x) Bai Xiaofang (Chinese Academy of Sciences). Those world renowned professors interested to know what I am working on right now—in ResearchGate. Their query inspires me always.

8. References

1. Buffaloe ND. Principles of Biology. Prentice Hall Inc., Englewood, Cliffs, New Jersey, 1963.
2. Darwin C. The Origin of Species. Oxford University Press, London, 1859.
3. Ahad MA. Darwin's theory is the mixture of Malthus's theory and Lyell's theory and Darwin use wrong Lamarck's theory as well as believe as a mechanism of evolution. Am. J Life Sci. 2014; 2(3):128-137.
4. Ahad MA. Sociobiology is not a theory of evolution but a branch of entomology, which deals with social insects. Academic Journal of Psychological Studies. 2014;

- 3(7):380-393.
5. Ahad MA, Ferdous ASM. Impossible of Macroevolution of New Species via Changing of Chromosome Number Mutation and Structural Mutation (Invalid chromosomal speciation Theory): Darwin's Theory and Neo-Darwinian Theory Oppose it. Martinia. 2015; 6(2):68-74.
6. Ahad MA, Ferdous ASM. Invalid of Oparin-Haldane's theory (soup theory) of 'origin of life' and useless of Miller experiments, it may be a theory of prebiotic chemistry: Father's of modern evolutionary theories Buffon, Lamarck and Darwin believed that life is created by a Creator. Martinia. 2016; 7(1):1-19.
7. Ahad MA. Artificial selection/hybridization (the main force of evolution) opposite to Darwin's theory and also opposite to macroevolution through chromosomal aberration/ chromosomal number mutation. Martinia. 2015a; 6(2):53-67.
8. Mader S. Human Biology, 6th ed. McGraw-Hill Higher Education, New York, 2001.
9. Krishnaswamy S. Biology, an Inquiry into Life. New Delhi: Tata McGraw Hill Publishing Co. 1971, 1.
10. Ritchie DD, Carola RG. Biology. California: Addison-Wiley Publishing Co., Inc., 1983.
11. Weier TE, Stocking CR, Barbour MG, Rost TL. Botany: Introduction to plant biology, 6th edn. John Wiley and Sons Inc., New York, 1982.
12. Scagel RF, Badoni RJ, Maze JR, Rouse GE, Schofield WB, Stein JR. Plants: An Evolutionary survey. Wadsworth Publishing Co., California, 1984.
13. Lawrence GHM. Taxonomy of Vascular Plants. Oxford and IBH Publishing Co. PVT. LTD. New Delhi, 1967.
14. Dutta AC. Botany: For degree students, 6th edn (31st impression). Oxford University Press, India, 2012.
15. Arms K, Camp PS. Biology: A journey into life. W. B. Saunders Company, New York, 1988.
16. Ville CA, Walker WF, Smith FE. General Zoology. W.B. Saunders Co., Philadelphia, 1968.
17. Sivarajan VV. Introduction to the principal of taxonomy, 2th ed. Oxford and IBH Publishing Co. PVT. LTD. New Delhi, 2001.
18. Ganguli AK. General Botany. Mohendra Nath Paul, 5/1Ramandra Majumder Street, Kholkata, India, 1977.
19. Dutta SC. Systematic botany, 4th edn. Wiley Eastern Limited, New Delhi, 1988.
20. Subrahmanyam NS. Modern plant taxonomy. Vikash publishing house, New Delhi, India, 1995.
21. Naik VN. Taxonomy of Angiosperms. Tata McGraw Hill Publishing Co., New Delhi, 1984.
22. Hickman CP. Integrated Principles of Zoology, 4th ed. The C.V. Mosby Co., Saint Lois, 1970.
23. Shukla P, Mirsa SP. An Introduction to Taxonomy of Angiosperms. Vikas publishing house Pvt. Ltd, New Delhi, 1992.
24. Starr C, Taggart R. Biology: the Unity and Diversity of Life, 5th ed. Wardsworth Publishing Co., Belmonte, California, 1989.
25. Wolfe SL. Biology, the Foundations, 2nd edn. Wardsworth Publishing Co. Belmont, California, 1983.
26. Mayr E, Linsley EG, Usinger RL. Method of Principle of Systematic Zoology. McGraw Hill Publishing, Inc., London, 1953.
27. WBES. World Book Encyclopedia of Science (Animal Kingdom), World Book, Inc., Chicago, 1994.
28. Cockrum EL, McCauley WJ. Zoology, Saunders Student edn. W.B. Saunders Co., London, 1965.

29. Nayar KK, Ananthakrishnan TN, David BV. General and Applied Entomology, 10th reprint. Tata Mc Graw Hill Publishing Company, New Delhi, 1993.
30. Wallace RA. Biology, the world of life, 5thedn. Harper Collins Publishers Inc., New York, 1990.
31. Stanley M, Andrykovitch G. Living: An Introduction to Biology. Addison-Wiley Publishing Co., California, 1984.
32. Purves WK, Orians GH. The Science of Biology, 2nd ed. Sinauer Associates Inc. Publishers, Sunderland, Massachusetts, 1987.
33. Case JF. Biology, 2nd ed. Macmillan Publishing Co., Inc., New York, 1979.
34. Moment GB. General Zoology. Houghton Mifflin Co., Boston, 1958.
35. Dodson EO. Evolution: Process and Product, east-west student ed. Affiliated East West Press Pvt. Ltd., New Delhi, 1960.
36. Haliman JP. Operationalism, optimality and optimism. In: Ho, Mae-Wan and S.W. Fox (eds.). Evolution Process and Metaphores. John Wiley and Sons, New York, 1988.