PALEOB0TANICAL EVIDENCES FOR A PHILOSOPHY OF CREATIONISM

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The topic of origins is usually treated as if it lay exclusively in the domain of science. Such classification is unfortunate and erroneous when the limitations of the scientific method are evaluated. Science improperly equipped to cope with problems of "how" here and now. For example, such matters as: 'how chromosomes migrate in dividing cells," "how water ascends in the trunks of trees,' and "how sugars move in phloem tissue" fall clearly in the sphere of science. Yet none of these sample problems has been thoroughly and absolutely settled. If scientific methods as yet cannot completely solve contemporary problems, how can these same methods be expected to yield absolute answers about origins? This does not belittle the amazing achievements of experimental science, but throws the limitations of the method into full focus. To move from present to primaeval past moves from experimental science to speculative and philosophical science. As the late Harry Rimmer has said:

> We may as well state at the very onset that it is crass nonsense to talk about a science of origin. In science we deal not with origin. That is rather the sphere of philosophy [1](pp. 70 & 71).

Thus the study of origins is not entirely science but is rather a philosophical system built upon scientific data.

The most direct line of scientific evidence involved is the fossil record. At least six puzzling propositions become apparent from a study of fossil plants. It is presently maintained that these six premises are readily explained by the "group" or "kind" creation proposal of Genesis, but cannot be adequately interpreted by any evolutionary theory — be it theistic, deistic, or naturalistic evolution. Evolutionary explanations of these six theses have of course been devised, but only with considerable embarrassment and rationalization.

1. Complex forms frequently appear before the simpler ones with no hint of an evolutionary ancestry.

Most evolutionary schemes postulate the flagellate organisms as working models of a primitive ancestor for all subsequently appearing life. (Flagellates are one-celled green or nongreen organisms with a whip-like organ of motility.) Theodore Delevoryas states that there is little hint of ***Chlamydomonas*** spp. or any supposed flagellate ancestors in early fossil layers.[2] (p. 12) It is maintained by some evolutionists that one would not expect to find fossils of delicate cells such as the flagellates. However, equally delicate structures are recorded in other instances. ***Phacotus*** (a flagellate-like form) is found in tertiary remains.[3](p. 12) Delicate fungal hyphae have been found in Meso-Cenozoic sedimentary rocks,[4] and on leaves from Eocene fossils.[5] Fossils of soft-bodied creatures such as jellyfish are also known [6] (p. 26). Wesley reported that rhizoids, fungal hyphae, and blue-green algae are well preserved in chert [7](p. 11). Thus the absence of supposed flagellate organisms in early layers cannot be easily rationalized. Likewise, the various groups of algae enter the fossil record with no hint of an evolutionary ancestry [2](p. 16). In addition, the fungus groups manifest themselves without any previous phylogeny [2](p. 17).

The mosses and liverworts are discreet entities in whatever layer their fossils are found [3](pp. 398-402) [2](p. 18).

The "telome theory" is a popular theoretical plan for deriving the vascular plants (plants with food and water conducting systems) from simple ancestors. This theory suggests that branched leafless Silurian and Devonian plants such as ***Rhynia Gwynne-Vaughani*** serve as working models of vascular plant ancestors. Accordingly, the branches or "telomes" of the generalized leafless ancestor supposedly condensed and joined yielding the various plant organs (e.g. leaves) of later vascular plants.

Two distinct and perhaps insurmountable problems face the telome theory. First, although leafless and much-branched, ***Rhynia*** sp. (and other early psilophytes) are by no means "simple." When they appear in the fossil strata they are already complex in their tissue structure since they have been found to possess conducting cells, stomata, guard cells, spores, etc.[3] (pp. 32-43) [2](pp. 25-31). These complex land plants manifest themselves in the fossil rocks with no previous lineage. Although evolutionists believe these plants have come from the green algae, there is no known ancestry for them. Secondly, leaves are supposed to have formed as branch systems (like those of ***Rhynia*** sp.) condensed and fused by evolution. In rocks of the same fossil layer (Devonian) plants with large ginkgo-like (fan-shaped) leaves are also present ***(Platyphyllum, Cyclopteris, Ginkgophyllum, Psygmophyllum, Germanophyton,*** and ***Enigmophyton)*** [3] (pp. 54 & 55).[8] ***Aldanophyton antiguissimum*** is a fossil plant specimen having shoots covered with small leaves about 9 mm long. This leafy plant occurs in Siberian Middle Cambrian rock and is thus supposedly older than ***Rhynia*** sp.[3](p. **47).** Thus the supposed telome ancestral prototype shows up at the same time as or even later than the supposed leaf-bearing descendants.

The groups of land plants in general are independent entities as far back as they are discovered in fossil rock. It is for this reason that some evolutionists feel obliged to accept a polyphyletic view of land plant origin[2] (p. 21). Although cast in a different philosophical framework, a polyphyletic ancestry is exactly what Biblical creationism proposes. Creationism solves the vexing problems encountered by evolutionists in evaluating the fossil series. Certain creationists believe that the entire fossil record is best interpreted as a layering of ecological zones during the progressive inundation of the earth at the time of the great flood. This flood-geological orientation has been ably defended by Clark[9] and Morris and Whitcomb.[10]

There is no indication of an evolutionary history for the lycopsids of today are usually small, low-growing, evergreen perennials. Earliest lycopsids from Silurian *(Baraguwanathia)* and Devonian rocks *(Drephanophycus)* are complex and specialized plants. Although they have been used as typical ancestors for other plants in certain evolutionary schemes, it appears that the Lycopsida group produced no other plant groups[2] (p. 49).

In the study of Arthrophyta another puzzle presents itself. The modern arthrophytes are short plants with longitudinally ridged stems having whorls of branches at various regular intervals. A modern example is the “horsetail” or “scouring rush.” Fossil spore-bearing structures of an arthrophyte *Cheirostrobus pettycurensis* have been found. These are complex twelve-membered whorls of two-parted sporangial-bearing appendages [3] (pp. 284-286) [2] (pp. 63 & 64). Delevoryas calculates a total of 144 sporangia (spore sacs) at only one such node! A spore is a microscopic one-celled reproductive unit. The point is that this extremely complicated and advanced spore bearing organ appears in the fossil record in the Lower Carboniferous strata — which means according to stratigraphic theory that it existed before most of the simpler arthrophye spore-bearing structures. The going evolutionary idea is therefore that sporangiate organs evolved from complex to simple. But even if the advanced and simpler types did evolve from complex forms such as *Cheirostrobus pettycurensis*, where did the early intricate forms come from ?

A stratigraphic study of fern fossils poses a series of similar enigmas. In the first place, the simpler coenopterid appear mostly in the Carboniferous, after the more complex protopteridales which show up back in the Devonian [2] (p. 69). Some evolutionary theorists propose the coenopterid as ancestral to the modern ferns. Delevoryas rejects this idea [2] (p. 79) since some of the supposedly descendant forms of ferns lived contemporaneously with the coenopterid. Secondly, some ferns were homosporous (bore only one size of spores), while other fossil ferns were heterosporous — bearing two different types of spores, one usually larger than the other. Evolutionary theories generally suggest that the heterosporous plants were derived from the supposedly simpler homosporous forms. In the fossils of the genus *Stauropteris,* the heterosporous species *S. burntislandica* appears in the Lower Carboniferous, earlier than the simpler homosporous *S. oldhamia* of the Upper Carboniferous [2] (p. 72) ! Thirdly Delevoryas has stated on the basis of leaf form and arrangement that some of the most complex of the coenopterid petioles (Zygopteridaceae) appear early in the record — Devonian [2] (p. 76). (The petiole is the stalk-like basal portion of a leaf.) Fourthly, some fossil ferns produce additional woody tissue (secondary xylem) each year by a growth of cambial tissue as do our trees today. Other fossil ferns produced no new woody tissue once the stem had expanded — like our modern herbs. Some of the earliest ferns or fern-like plants *(Aneurophyton germanicum)* were huge plants that produced secondary xylem. The later and more modern ferns were herbaceous (produced no secondary wood.) Once again in the study of fossil ferns a complex arrangement shows up before the simpler counterpart[3] (p. 68) [2] (pp. 69, 70, 93).[5] Fifthly, another fern family (Marattiaceae) manifests itself in well-established fashion in Upper Carboniferous strata with little indication of its previous history[3] (p. 94). Sixthly, the ferns of the family Gleicheniaceae appear suddenly in about the same stratum[3] (p. 94). These six examples illustrate that the fossil history of ferns is the sudden appearance of discreet forms rather than the gradual evolution of groups from groups.

In the Arthrophyta, where complex forms appeared first, evolutionary theory suggests that plants changed from complex to simple. However, in a study of ferns and fern-like plants where successively higher strata show simple “pre-ferns” first and complex forms later, evolution is supposed to have gone from simple to complex. It looks as if evolutionary theory is of very little predictive value but is simply a rationalization or “afterthought” of whatever paleobotanical data appear!

In fossil botany the term “seed”[3] designates a sac (megasporangium) usually containing only one large spore (megaspore) and with a tissue or tissue system (integuments) covering the entire sac. In modern seed plants the seed frequently becomes detached from the main plant and an embryo producer within the seed can yield a new plant. Seeds or seed-like reproductive bodies are found attached to several different kinds of fossil plants. Although hypothetical schemes have been devised, no one knows how the seed came into existence in any of the seed-bearing plants [2] (p. 97).

Seeds were borne on some fossil plants with fern-like leaves (Pteridospermales or “seed ferns”). Some evolutionists believe that seed ferns arose from the true ferns (fern-like plants without seeds).

Some of the seed ferns *(Calatrospermum* spp.) are present earlier in the record than are the true ferns from which they supposedly evolved! For this reason some evolutionists believe ferns and seed ferns have had an entirely independent or “polyphyletic” origin [3] (p. 159). There is no evidence that the pteridosperms originated form the true ferns. They simply appear in the Lower Carboniferous leaving no clues of any ancestral history[2] (p. 128). Once again a miraculous creation by non-evolutionary mechanisms finds ample supporting evidence from the fossil series.

Seed ferns varied in the way seeds were attached to the plant. Some bore their seeds on a truss with many branches *(Eurystoma angulare).* Others such as *Stamnostoma huttonense* had a pair of more symmetrical trusses on each stalk.[11] Others had many seeds borne on stalks within one cupule (*Calathospermum* spp.) Some like *Gnetopsis elliptica* had only a few seeds within a cupule. Still others had only one seed in a much-reduced cupule *(Lagenospermum* spp., *Neuropteris tenufolia,* and *Pecopteris pluckeneti),* [12 3] (pp. 157-159[2] (pp. 168-169). In a fascinating paper, Mary Hubbard and the late Wendell Camp have proposed a theoretical plan of seed fern cupule evolution. Andrews [11] likewise presents a plan of cupule evolution on the basis of such finds. The seed-bearing branches of a truss (as in *E. angulare)* supposedly fused to form a many-seeded cupule (as in *Calathospermum* spp.) . Subsequent evolution supposedly reduced the number of seeds within the cupule to a stage like *Gnetopsis elliptica,* and finally to one seed in the cupule as in *Lagenospermum* spp. and others.[12] Considering the supposed stratigraphic dates, it is most interesting that the truss-like ancestor appears at about the same time (Lower Carboniferous) as do the supposedly descendant many-seeded cupule and the few-seeded cupule! [12], [3] (pp. 154 & 155). For a known fossil to be the prototype of a supposed ancestor or link in an evolutionary series, it should appear at the appropriate geologic time level. It may be an interesting academic exercise to build evolutionary series from three fossils which first appear at about the same time, but such an endeavor can hardly be taken with any certainty. Forms which show up contemporaneously probably have not given rise to each other. When these fossil finds are viewed objectively — either in a catastrophic or uniformitarian framework of geology — there is no evidence for evolutionary descent since all these forms were contemporaries. Thus Andrews’ and Camp and Hubbard’s interesting scheme for cupule evolution is particularly speculative. Even if their theory were valid, the complex truss and cupule bearing seeds (ovules) with intricate pollen-trapping appendages *(Gnetopsis* spp.) or pollination droplets in others make their appearance in the record without clear ancestral information. In fact, Camp and Hubbard state that the ovules on these early fossil forms are more advanced than the ovules or seeds of our modern flowering plants.[12] Andrews [11] presents a series of different fossil seeds as evidence for the evolution of the integument (a cylindrical covering of the seed) from an integument divided into a series of distinct filaments. However, both the “primitive” and “advanced” integument types appear in the same layer — Lower Carboniferous — with no evidence of a common ancestry.

Some fossil plants bore their seeds with no fruity covering and hence were naked-seeded or “gymnosperm” plants. Several distinct groups of gymnosperm make their appearance in the strata. Since some of the gymnosperm plants are found in the same levels as the seed ferns, evolutionists are not sure if the gymnosperm are directly related to the seed ferns[2] (p. 101). In fact, the cycadophytes (plants like the modern cycads) were already a well-defined set of groups when they first appeared at the Permian and Triassic layers[3] (p. 312). There is no hint of an evolutionary descent. Henry Andrews believes that they had an origin independent of the seed ferns. He concludes that gymnosperm and seed fern plants may have arisen separately along two different lines from a very early state [3] (p. 312). It appears reasonable to believe that the groups of cycadophytes were each created.

Some gymnosperm plants bear their seeds upon leafy scales of “cones” and are thus called “conifers” (cone-bearers). The conifers also are an evolutionary conundrum since they have been a definite and separate group as long as the seed ferns [2] (p. 149). Andrews believes that the Cordaite-conifer group has arisen independently of any other seed plant group [3] (p. 315).

Another gymnosperm plant group is the Gnetales — an example of which is the present day Mormon Tea plant or *Ephedra* spp. Delevoryas indicates that little is known about the origin or evolution of the Gnetales group. *Ephedra-like* pollen is found as early as the Oklahoma Permian deposits. Andrews states that even in such early layers the pollen is clearly recognized as that of a gnetalean genus — Ephedripites [3] (p. 460) [2] (p. 165).

The ginkgos (e. g. the modern Maidenhair tree with its fan-shaped leaves) and the Taxales (evergreen shrubs such as our “Yew” trees) are other groups of gymnosperm. Concerning these groups. Andrews quotes Florin as stating that as far back as fossil material is found, the conifers, ginkgos. and Taxales are distinct and clearly differentiated from one another [3] (p. 315). Delevoryas cites evidence to demonstrate that the Taxales have been a distinct group since the Jurassic times [2] (p. 163). Wesley states that there is little likelihood that the single terminal seed of the Taxales is derived from the conifers [7] (p. 49).

2. **Supposedly “advanced” and “primitive” characteristics occur in the same fossil plant.**

Only two examples of this second enigma will be considered, although others exist. The Upper Devonian fern-like plant *Racophyton zygopteroides* is primitive in many respects (e.g. no leaf blades present) but is quite advanced in that it presents an intricate three-dimentional system of branches (some bearing sporangia) [2](p. 92) [3](p. 64).

Before Charles Beck’s work of 1960, *Archaeopteris* spp. (with its long, primitive, fern-like leaves) was thought to be quite distinct from *Callixylon* sp. which had the advanced woody anatomy of the gymnosperms. In Beck’s work, however, *Archaeopteris* spp. leaves are reported as attached to a *Callixylon* sp. stem [8]! In woody anatomy *Archaeeopteris* spp. is therefore as “advanced” as most gymnosperm, yet its leave are fernlike [8,12]. Although evolutionists plead that it is possible for part of a plant to evolve more quickly than another part, it is presently postulated that the discovery of primitive and advanced features in the same fossil specimen is more easily and more adequately explained from the standpoint of non-evolutionary creationism.

3. **Modern forms frequently are identical or similar to remote fossil specimens.**

Changes in the non-vascular plants (e.g. fungi and algae) throughout geologic strata have been only slight. Frequently extant algae are quite similar to the fossil types. Also in the mosses and liverworts extant forms are similar to the fossil entities. Any evolutionary descent for mosses or liverworts is a puzzle [3](p. 398, 406) [7](p. 5 & 6). The genus *Lycopodites* of the Paleozoic is like the *Lycopodium* or “ground pine” of today [2](p. 47). Plants with fan-shaped foliage like modern ginkgos have been found from the Upper Devonian to the present [8,3] (p. 54 & 55).

A persistent and perhaps unanswerable question that faces the “living fossil” concept is, “Why did certain plants stop evolving long ago?”

4. **Where supposed phylogenies (family trees) are postulated, significant gaps occur.**

The evidence for gaps in supposed ancestral trees is so well-recognized by both creationists and evolutionists that only two brief examples will be presented. For a review of literature pertaining to the gaps see Arthur Custance [13] and Paul Zimmerman.”

The arthrophytes in higher layers such as the Calamites (tree-like plants resembling the “horsetail” of today) are supposed to have descended from a prototype something like *Protohynia janovii* of the Lower Devonian or *Calamophyton* spp. of the Middle Devonian. But Andrews believes there is a gap between these early supposedly ancestral plants and the later arthrophyte groups of the Carboniferous[3] (p. 285).

The cone of coniferous gymnosperm is supposed to have originated from earlier plants which bore seeds on short branched stalks. The supposed ancestral types such as *Cordaianthus* spp. bore their seeds on dwarf leafy branches. At the base or axis of each leaf on the dwarf branch, there arose a secondary dwarf branch let. The dwarf branchlets were composed in turn of bracts (leaf-like structures) –- some of which were sterile and some of which (the more terminal ones) bore seeds. The whole reproductive structure was thus a leafy branch with many branchlets, each branchlet bearing bracts and seeds. The branch is supposed to have lost bracts and seeds from the branchlets by evolution until only two seeds(and perhaps a bract) were left in the leaf axil — this then being a structure like the modern pine -cone. Although Andrews himself believes such a series is clearly illustrated through the sequence of *Cordaianthus pseudofluitans* (many bracts and seeds on a branchlet) to C. *zeilleri* (many bract but only four seeds per branchlet) to *Lebachia* spp. (one seed, many bracts per branchlet) to other forms that seem to approach the structure of a pine cone, he admits that there are noticeable gaps between these supposed linking stages [3](p. 320-235) .

The gaps which set apart certain fossil groups are so distinct that the groups cannot be easily classified in *any* of the known taxonomic categories! The Noeggerathiales have both large and small spores borne in delicately fringed cup-chaped sporophylls. Wesley admits that these fossil plants cannot be classified in any known taxonomic category [7](pp. 31-35). The system of gaps and distinct groups evident argues for the non-evolutionary- and miraculous creation of discreet functioning organisms.

5. **Some of the anatomical characteristics thought to be earmarks of only one particular group or set of groups have been found distributed in other supposedly non-related groups.**

Fern-like fronds (leaves) show up in several distinct groups. Such leaf structure is seen in the true ferns, seed ferns, and in the puzzling *Archeopteris.* [15]

Stomata (with their associated guard cell apparati) appear on most of the land plants. Many of these groups are supposed to have arisen from the algae independently of other groups. Even bryophytes such as the moss sporangial epidermi and hornwort sporophytes manifest stomata. (The epidermis is a tissue usually of one cell thickness and covering the surface of plants. The sporophyte is the generation which bears the spores.) According to evolutionary thought, this necessarily implies that the guard cell-stomata complex arose by chance many times in otherwise independent lines! The same incredible idea must then apply to the other anatomical features which any of these polyphyletic groups may have in common such as tracheid cells.

Some plants bore their seeds completely enclosed by a fruity structure called a carpel. Although true carpels are evident in angiosperms only, carpel-like structures have been found in supposedly non-allied lines. On *Caytonia* sp. of the Mesozoic seed ferns, there are distinctly fruit-like bodies[2](p. 126) [3](pp. 176-179). This must mean (according to recent evolutionary theories) that fruit-like structures arose at least twice by chance in independent lines! The distinct creation of identical components in different plants is a more adequate explanation of such phenomena.

The Pentoxylaceae are a fascinating group of gymnosperm plants which combine features that are characteristic of several other distinct groups. They have stomata like those of the Bennettitales, a vascular leaf anatomy somewhat like that of Cycads, and a branched ovule-bearing organ that is not quite like the Bennettitales or Cycads. Wesley concludes that these plants must stand apart as a distinct group combining characteristics of the Medullosaceae, Cycadales, and Bennettitales[7](pp. 49-52) .

6. The entire problem of angiosperm ancestry has remained a complete mystery.

Cycadeoidea dacotensis has been suggested as an ancestral working model for angiosperms because it was thought to bear a structure somewhat like a *Magnolia* flower. There was an ascending series of whorls of reproductive parts on a short branchlet that gave botanists the idea that this bennettitalean plant could be somewhat like the ancestor of flowering plants. The flower-like structure in question has a lower whorl or whorls of sterile bracts — thought to correspond to the sepals and petals of modern angiosperms. Above these there was what was thought to be a whorl of compound microsporangiate stalks, which were believed to unfold during growth, forming something like a whorl of stamens in a flower. Finally, there was a central ovule-bearing axis that certainly reminds one of the seed-bearing portion of a *Magnolia* flower. Delevoryas, however, has shown that Wieland's earlier reconstruction of 1906 was in error concerning the supposedly branched and stamen-like pollen-bearing organs. According to Delevoryas' latest work, these were not branched and stamen-like but formed a massive compound synangium with a fleshy distal sterile mass of tissue. This whole fused item is supposed to have fallen from the stalk as a unit — something quite unlike the supposed Magnolian descendant [16 2](pp. 134, 171). So, what looked like a perfectly good ancestor for the *Magnolia* flower, (and is still portrayed as such in most recent textbooks) is now seen to have been something entirely different. Delevoryas, who brought about this brilliant corrective research, suggests that the history of the flowering plant still remains a mystery. As far as the fossil record gives indication, angiosperms were always angiosperms. This demonstration that the Bennettitales were probably not ancestral to flowering plants rocks the whole foundation of angiosperm taxonomy under the famous and much-revered Besseyan plan — since this plan assumed that *Magnolia* was primitive due to its bennettitalian similarities and the willow was treated either as a much-reduced or advanced type!

A review of the evidence presented in these six propositions (and much other information) may be what led the famous botanist Heribert Nilsson to conclude after much research and study by saying:

> My attempts to demonstrate Evolution by an experiment carried on for more than 40 years, have completely failed. At least, I should hardly be accused of having started from a preconceived anti-evolutionary standpoint . . . .
>
> It may be firmly maintained that it is not even possible to make a caricature of an evolution out of paleo-biological facts. The fossil material is now so complete that it has been possible to construct new classes, and the lack of transitional series cannot be explained as being due to the scarcity of material. The deficiencies are real, they will never be filled. (As quoted in [13](p. 51.)

Those who propose Biblical creationism as a plan of fossil interpretation are sometimes said to worship a "God-of-gaps." This is not entirely true, however, since creationism recognizes God as the author of natural laws also. Creationism simply recognizes the possibility of "miracle" in the creation "toolchest" and asks for no "God-of gaps" alone, but suggests that it was a "God-of-groups" who created "After their kind." The fossil evidence supports the miraculous creation of distinct types. Such creation appears to be special, rapid, and non-evolutionary.

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