

The Scriptural advent of animal carnivory

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Many Christian commentators seem to accept that ‘carnivory’ developed among animals immediately following the Fall of Adam and Eve. At the Fall, death entered the world and the Earth was cursed as a result of man’s sin. It is the contention of this paper that this pre-flood position is not well established by the internal evidence of Scripture, but rather has been artificially bolstered by the external ‘evidence’ of science. The evidence of the Biblical record better supports the post-Flood beginning of carnivory for several reasons: (1) at Creation, God specifically established a vegetarian diet for both man and animals, (2) after the Fall, it is reiterated to Adam that they will continue to eat of the green plants of the field, (3) if, in the pre-Flood, post-Fall environment, no need developed for mankind to become carnivorous, there is no reason for animals to have been so either, (4) it is only *after* the Flood that God specifically tells Noah that ‘*in the same way*’ that he was previously given vegetation for food, he is now given the animals and fish as food, (5) *after* the Flood, the relationship between men and animals becomes adversarial (God placed the ‘*fear and dread*’ of mankind upon the animals) and this was, therefore, clearly not the case before the Flood.

In addition, the post-Flood advent of carnivory makes the account of Noah’s Ark more feasible: no vicious carnivores, who required meat to sustain them for the duration of the Flood, were taken on the Ark, simply because they were still herbivores who were harmonious in their relationship to man. The lifespan and dietary changes were initiated by God (and certainly may have included genetic changes) after the Flood for many reasons, one of which was to sustain life in the radically changed post-Flood environment.

Most current Christian commentators assume that the Fall of Adam and Eve produced the advent of carnivory in animals. The Fall is the entryway of sin, death and decay into the ‘very good’ of God’s Creation. There, God also pronounces that ‘thorns and thistles’ will now be man’s lot in life (Gen. 3:18). Thorns and thistles, therefore, were not

part of the ‘very good’ of God’s initial creation and were inserted at this point. Certain animals today seem so well suited for carnivory that they are presumed to have been either created this way or specifically redesigned at some point. The Fall, therefore, seems to be an appropriate place for inserting any genetic changes necessary for carnivory. In addition, other commentators evidently feel that the Fall is the only acceptable place, other than Creation week, for allowing God’s direct creative acts in nature.

And yet, the Biblical text states nothing regarding the advent of carnivory at the time of the Fall. Furthermore, there is no explicit Biblical reason for limiting the Creator of the universe to creative activity only during the initial Creation week or at the Fall. He certainly did creative miracles many other places within history. He changed a wooden staff into a live serpent; He created wine from water; He created leprous skin in an instant (Moses and Miriam); He often created whole skin and bodies from leprous ones; He created fish and bread; He created gnats from dust; He brought life from death. He rested *on the seventh day*, not forever.

The pre-Flood evidence of Scripture

In the Genesis Creation account, God tells Adam and Eve, ‘I give you every seed-bearing plant on the face of the earth and every tree that has fruit with seed in it. They will be yours for food’ (Gen. 1:29 NIV). It is clear from this account, that man was not *created* as a carnivore. The verse that follows makes it equally clear that mankind and animals were alike in this regard. God continues, ‘And to all the beasts of the earth and all the birds of the air and all the creatures that move on the ground—**everything that has the breath of life in it**—I give every green plant for food [emphases added].’¹ God did not add, ‘And to some of the animals, I also give each other as food’. Animals were neither created as, nor intended as, carnivores. The question is not, how did God intend animals to function, but when did the change occur?

At the Fall, death entered the world and the earth itself was *cursed*: ‘Cursed is the ground because of you’, God said to Adam, ‘through painful toil you will eat of it all the days of your life. It will produce thorns and thistles for you, and **you will eat of the plants of the field**. By the sweat of your brow you will eat your food until you return to the ground ... [emphases added]’ (Gen. 3:17–18 NIV). Even before the Fall, we are told God put man in the garden ‘to work it and take care of it’ (Gen. 2:15). It seems, then, that Adam’s work is not to make the earth produce, but to overcome the thorns and thistles which now arise. Consequently, there is no reason to assume from these verses that animals no longer had the vegetation to eat that God provided before the Fall.

More importantly, the Fall and the ensuing curse *do not change* man’s diet. In fact, God specifically reiterates that man will continue to eat the plants of the field. Even though death has entered the world, and the Earth has been cursed,

and humans and animals will now face death, there is no need—physiologically or morally—for people to begin eating animals. Since humans and animals were tied together by diet in Genesis 1:29–30, I submit there is no Scriptural reason for separating them here. If animals were earlier given the same dietary restrictions as mankind, and the Flood produced no change in either man’s dietary requirements or allowances, there is no theological or physical reason to postulate a change in the diet of animals either. In fact, there are good reasons not to do so.

Before the Flood, the world’s environment was *vastly* different. The flora and fauna existed both in vastly larger numbers and in greater sizes than are now possible,^{2–4} plants grew in abundance in many areas that are now either wastelands or buried under ice;⁵ mankind, and perhaps animals as well,⁶ had vastly longer lifespans. In this very different climate and environment, man was able to live for close to 1,000 years. In fact, in looking at the Biblical genealogies from Adam through Noah, it is clear that a graph of their lifespans is virtually a horizontal line. There is no appreciable deterioration in lifespan for almost 1,700 years.⁷ If, as some Biblical scholars and scientists contend, the dramatic changes in man’s lifespan after the Flood were due to deleterious atmospheric and environmental changes, then, according to this contention, it should be clear that the Earth’s environment before the Flood remained constant. During this time, there remained no need or permission for man to eat animals.⁸ In which case, there is no reason, textually or physically, to postulate the need for animal to eat animal. Indeed, there are textual references that make it clear that God directed such changes at the time of, and following, the Flood.⁹

Post-Flood changes

After the Flood, there are two more specific references that give further clarity to the changes wrought by God. The first is found in Genesis 9:2. Here God pronounces to Noah that ‘the fear and dread of you will fall upon all the beasts of the earth and all the birds of the air, upon every creature that moves along the ground, and upon all the fish of the sea; they are given into your hands’. If it is not fully clear from Genesis 6:3 that God initiated directive genetic changes in conjunction with the Flood, it is nevertheless clear that such changes *did* indeed take place: mankind’s lifespan *was* tremendously altered—reduced by an average of over 800 years! In this instance, however (Gen. 9:2), it is not only clear that the ‘fear and dread’ of man is a *new* pronouncement, but that it is specifically directed by God. There is simply no clear theological, interpretive, or hermeneutical reason this change could not have included *genetic* change. In fact, it almost certainly would have required such change.

If Genesis 9:2 does not indicate a significant change in the relationship between man and animals, there was no reason to pronounce such change and inform Noah of it. This pronounced change also implies a general harmoni-

ous relationship between humans and animals before the Flood and, by implication, among animals as well. For instance, Isaiah 6:11 states that ‘the wolf will lie down with the lamb, the leopard will lie down with the goat, the calf and the lion and the yearling together, **and a little child will lead them** [emphasis added]’. Whether this particular prophecy is taken literally or only figuratively is irrelevant because the picture demonstrates God’s intended idea of harmony: wolves do not eat lambs and lambs do not fear wolves; leopards and goats the same; but, *also*, children are not afraid of carnivores *or vice-versa*.¹⁰ This seems to indicate that, for animals, these two fears go hand in hand: fear of each other *and* fear of humans. Before the Flood, if animals were generally engaged in carnivorous activity, how is it possible that they were *not* afraid of humans at this time? Is it possible for them to live in harmony with man and yet kill and eat each other? Would they not attack and kill men as readily as any other animal? It is the fear and dread of humans that now keeps the wild animals generally isolated from mankind. Did carnivores therefore distinguish between man and other animals? We cannot argue from current experience because we now live in a world in which wild animals *do* fear mankind.

One question that must be answered by advocates of a pre-Flood origin of animal carnivorism, is, why was the fear and dread of man made necessary after the Flood if it was *not* necessary before the Flood? Dr Wieland addresses this question by asserting that ‘God’s reasoning is not revealed, nor is it clear in any way that this was the basis of any “need”...’.¹¹ While it may be true that God’s reasoning is not revealed, it does not follow that He *had* no reason, nor is there anything inappropriate in trying to discern His reasoning from His revealed Word. If God did it, He clearly did it for a specific purpose, even if the full meaning was not spelled out in detail.

It seems possible that the ‘fear and dread’ of mankind could have been initiated by God after the Flood to cause animals to disperse, as well as to protect mankind from the advent of carnivorism. Immediately after the Flood, there were only eight people surviving. Yet there were lions and tigers and bears and *Tyrannosaurus rex* and many other ‘carnivores’ all looking for food. Had these animals continued to have no fear of man, they would presumably have found people as tempting a morsel as any other potential source of food. The fear and dread of man would therefore have caused the animals to disperse and spread out more rapidly.¹² With these new conditions of carnivorous activity beginning, the fear and dread of man would also, therefore, serve to protect animals from early extinction. In fact, this is all the more reason to see carnivorous activity as a post-Flood phenomenon.

Many commentators (secular and Christian alike) have argued against the feasibility of Noah being able to sustain an ark full of carnivores for over a year without depleting his stock of herbivores in the process. John Woodmorappe does a commendable job of demonstrating that Noah could have provided other dietary means sufficient to sustain



God's proclamation of Genesis 9:2 may have protected Noah and his family from the onset of carnivorousness. It may also have assisted in the dispersal of the animals after the Ark had grounded.

carnivores—perhaps even by using dried, cured meats.¹³ While this possibility is credible for the duration of the Flood, it remains inadequate for the period after the Flood. If dried, cured meats were necessary to sustain carnivores on the Ark, such provision would be even more necessary following the Flood. During the Flood, the ‘carnivorous’ animals would have had choice herbivores all around them, which they presumably couldn’t touch; after the Flood, though, as the animals widely dispersed, carnivores would have found their food choices much more scarce. And if these carnivores left the Ark *as* carnivores, then every meal could potentially have wiped another species from the earth. If the population of herbivores on the Ark were sufficient to sustain the carnivores *after* the Flood, should it not have been sufficient during the Flood? No special provisions would have been required: the carnivores would simply have fed upon the herbivores with them on the Ark. Even accepting that Noah may have taken as many as fourteen¹⁴ animals of each clean kind with him on the Ark does little to provide sufficient food for all the carnivores. Further, assuming there were many more varieties of herbivores than carnivores does not provide much assistance because many herbivores are considered unclean¹⁵ and were therefore only spared the Flood in a single pair. The death of even *one* of these animals would have forever removed its kind from the Earth. Consequently, it is not sufficient to explain how carnivores were provided for in the temporary environment of the Ark; one must also account for their immediate diet upon leaving the Ark. If the carnivores, who now feared man and were no longer caged by Noah, turned immediately upon the other animals, it would seem that all the effort that went into preserving such animals through the Flood—and keeping them apart from the carnivores!—was for naught, because many kinds would have become immediately extinct. And yet God said that His purpose in bringing these very animals onto the Ark in the first place was to ‘keep their various kinds alive throughout the earth’ (Gen. 7:3).

Far more tenable is the explanation that the relationship between Noah and the animals on the Ark was still harmonious. There was no ‘fear and dread’ of mankind; there were no carnivores as yet. They all ate the dried fruits, grains, berries and vegetation brought by Noah as ‘every kind of food that is to be eaten’ (Gen. 6:21). The animals before the Flood neither feared man nor were feared by him precisely because there was no need for their separation. Therefore, I would contend that none of the animals that left the Ark operated as carnivores, either on the Ark, or initially upon leaving the Ark. As animals dispersed over the earth, whatever specific changes God instituted after the Flood took some time to take full effect in order to allow animal populations to grow and stabilize.

Another verse that has immediate bearing on the same issue is the very next verse in Genesis 9: ‘Everything that lives and moves will be food for you. Just as I gave you the green plants, I now give you everything (v. 3)’. Some commentators have contended that this has no bearing on the beginning of carnivorous activity either among humans or animals. For instance, Dr Wieland suggests that ‘The permission given to man after the Flood was exactly that—permission. Not a change in metabolism’.¹⁶ I would submit that such a position is highly untenable for several reasons. First of all, the text says nothing about ‘permission’, either directly or by implication. God actually says, ‘**Just as I gave** you the green plants, I **now** give you everything’. In other words, ‘in the same manner, and for the same reason’ that God gave the green plants, He now gives animals as well. He is not giving humans ‘permission’ to eat animals; He is giving them what they need, in the same way that He once gave them green plants. Any insistence that this means only permission, forces the unlikely conclusion that God originally gave mankind only ‘permission’ to eat green plants, but they had no *need* for such food. Furthermore, left unanswered—and perhaps unanswerable—is the question, ‘Why did God give such “permission” only after the Flood?’ Did God decide that since immoral humans were going to kill and eat animals anyway, He might as well eliminate one sin by just giving them permission? If that were the case, why not just give them ‘permission’ to commit adultery and numerous other sins as well? Does this not seem completely out of keeping with God’s character and nature? I know of no other place in Scripture where God changed His laws, or the consequences of disobedience, as a concession to sin.

Wieland and others have concluded that immoral humans, who made choices of their own, undoubtedly killed and ate animals in the post-Fall, pre-Flood world.¹⁷ This may even be true, but it is a moot issue. For even if this were a demonstrable fact rather than an *a priori* assumption, it demonstrates nothing about either the nature or advent of carnivory. Today, shepherds keep flocks of sheep (or

herds of cattle, etc.) that are tamed by human contact. Periodically they may remove a sheep from the flock, kill it and fix it for dinner. The other sheep do not begin fearing the shepherd after this. They do not attack him in return, nor do they begin eating either each other or the shepherd. Obviously, sheep are herbivores, but the point is that even if *people* made the immoral choice to kill animals before the Flood that, in and of itself, says *nothing* about whether or not animals killed each other as well. People are capable of making moral, and therefore immoral, choices; animals are not. *If* men killed animals before the Flood, they did so on the basis of sin and *not of need*. The simple fact is that before the Flood, both pre- and post-Fall, humans were *told* that they were given green plants for food, and *the same was true of animals*. No distinction is made between the diet of humans and animals either before *or* after the Flood. It is *only* after the Flood that people are specifically given animals to be their food *in the same way* that they were once given only green plants. Consequently, since humans were given a vegetarian diet before the Fall, and they had no physical or spiritual reason to change this diet until after the Flood, and since animals were specifically given the same pre-Fall diet as mankind, there is no physical, spiritual or textual reason to postulate that animals preceded humans as carnivores.

Physical evidences

In a recent article in *Creation*, Dr Walter Veith made some interesting and salient points that I would interpret in favor of a post-Flood beginning for carnivorous activity. First of all, he gave credence to my earlier assertion that the fossil record attests to the fact that we now have only a small fraction of the flora and fauna that existed before the Flood.¹⁸ This clearly implies that the abundance of the flora (plant life) of the pre-Flood world made carnivorous activity unnecessary.

He went on to point out that ‘we don’t know what animals ate in the past. Tooth structure is not a good indicator. The panda bear [for instance] is classified as a carnivore, but it eats bamboo’.¹⁹ In other words, finding *Tyrannosaurus rex* and saber-toothed tigers, with sharp teeth and claws, in the fossil record says *nothing* about whether or not they were carnivores. He points out that in many observed instances, a change in environment that damages or reduces vegetation can result in carnivorous activity among animals that are normally herbivores. For example:

‘... with the destruction of northern hemisphere forests by acid rain, ... animals like chipmunks, normally seed-eaters, will now eat animals run over on the road. New Zealand’s kea parrots started to attack and eat sheep. They have the same talons and beak structure as a bird of prey but they weren’t using them for this until their food source ran out. And most bears ... [only eat fish] at the time of the salmon run, because there are no berries around that early in the season. Later they become 70–80%

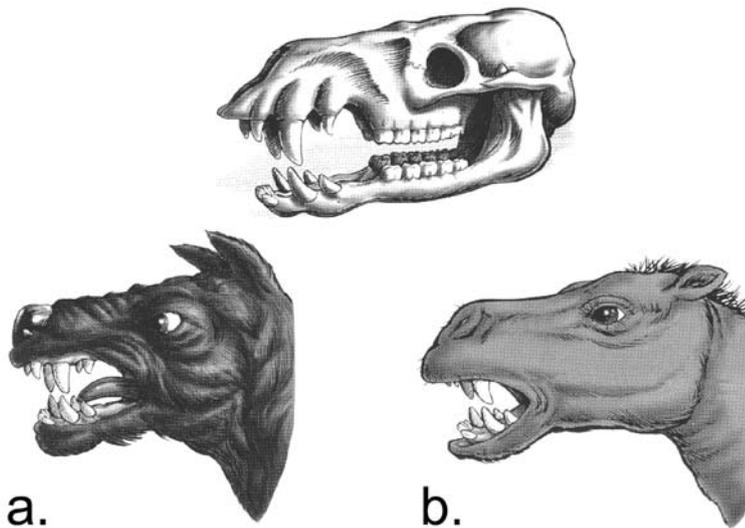
herbivore, even though they have the “equipment” to be carnivorous.’²⁰

In other words, the ‘tools’ of carnivores are not necessarily carnivorous tools. Animals that are now herbivores under most conditions, have the same tools as those animals we consider to be normally carnivorous. It is, according to Dr Veith, largely *need* that in many cases produces carnivorous activity and not *nature*. The implications of Dr Veith’s own analysis is that most *need* can clearly be attributed to the post-Flood world, since that is when much of the world’s flora was destroyed, never to return. Animals had no more physiological reason to begin killing and eating each other before the Flood than did humans.

Dr Veith does believe that God re-engineered existing genetic information after the Fall (to produce such things as thorns and thistles and perhaps even the toxic nature of snake venom).²⁰ I have no argument here unless he insists that this is necessarily the *only* place where God may have engineered change. It is, as even he has noted, abundantly clear from the fossil record that major changes took place after the Flood.

Another of the intriguing aspects of portions of the fossil record that gives further credence to a post-Flood advent of carnivorism, is the ratio between so-called carnivores and the herbivorous population needed to sustain them. In some places it has remained an inexplicable phenomenon that an overwhelming majority of the animals found buried in a particular region are considered to be carnivorous by nature, and there are no sustaining numbers of herbivores found with them. Immanuel Velikovsky points out that, of the various fossilized animal remains unearthed at the La Brea Tar Pits in Southern California (USA), ‘the fact that the vast majority of them are carnivorous, whereas in any fauna [animal population] the majority of animals would be herbivorous—otherwise the carnivores would have no victims for their daily food—requires explanation’.²¹ In one area, ‘a bed of bones was encountered in which the number of saber-tooth and wolf skulls together averaged **twenty per cubic yard** [emphases added]’.²² These animals were all clearly ensnared by a cataclysmic event because their remains are never complete; they are broken in pieces and jumbled catastrophically together. Even if it were argued that these animals were swept together by the Flood from over a wide region, it is highly unlikely that the Flood was selective in gathering only the carnivores together and sifting out the herbivores. It then becomes even more untenable that these carnivores existed over vast regions with no corresponding herds of herbivores to sustain them.

However, these finds present no difficulties to the theory that carnivorism was instituted after the Flood. Large populations of saber-toothed tigers were able to peacefully co-exist with wolves and other carnivores—without any herds of the requisite herbivores—precisely because they were not yet carnivorous. Recall from Dr Veith’s earlier citations that much current carnivorous activity can be attributed to environment and need. And yet, it is in the aftermath of the Flood that the available flora is greatly diminished in both



An animal's diet cannot necessarily be determined by its teeth shape. Consider the teeth of the skull illustrated above. With only the skull available to examine, a likely conclusion is that it belongs to a ferocious carnivore (a). In reality, the skull is that of a camel (b).

quantity and size. Clearly, even based on the fossil record, the need for carnivory would have greatly increased *after* the Flood even if we did not have Scriptural indications that this is where it was introduced.

There are various 'scientific' arguments which have been put forth for a pre-Flood, post-Fall advent of carnivory (such as fossils with 'kill' bite marks, coprolites—fossilized dung—with animal remains in them, etc.). I would contend that most of such interpretations of the evidence are put forth by those already wedded to the belief that certain animals were always carnivores; and that dinosaurs existed millions of years ago. Even the most obvious evidence can be misconstrued by someone beginning with a false premise. For example, evidences of a global flood having caused the major geological features—and fossil record—are routinely misinterpreted because the modern belief system precludes such an interpretation. In the past, scientists were even able to put together a few human skull fragments with the jawbone of an orangutan, a bit of plaster and a lot of imagination and proclaim it as 'the best evidence available that men evolved from apes'.²³

Much speculative fiction on the character of *T. rex* has been published in recent years under the guise of 'science'. Unfortunately, few seem to recognize that it is not *facts* that are being reported, but interpretations. For instance, as recently as September 1999, *Scientific American* reported the results of a paper by Currie and Tanke, that told of 'bite marks' on *T. rex* skulls complete with supposed indications about the way *T. rex* fought and killed. According to the article, 'these bite marks consist of gouges and punctures on the sides of the snout, on the sides and bottoms of the jaws, and occasionally on the top and back of the skull'.²⁴ This was said to demonstrate the vicious carnivorous nature of *T. rex*. And yet, three months before this article appeared,

National Geographic recorded an interview with specialist Chris Brochu who examined these very same wounds and 'bite marks.' His interpretation is entirely at odds with the 'facts' reported by *Scientific American*. Brochu has talked with forensic pathologists and carefully examined the marks in question and concludes they are *not* bite marks: 'I can't find a bite line. I've tried to match these holes with most every jaw and skull I can find, and I can't get the teeth on any skull to line up with the perforations on this jaw. So what do I think? I think it could have been **some sort of infection**, some periodic wounds that healed [emphases added]'.²⁵ Furthermore, the finely serrated edges of *T. rex* teeth show no evidence whatsoever of having chewed on meat and bones, so those who insist upon the vicious carnivorous nature of this creature simply conclude that

its teeth were regularly replaced every two to three years. Yet, such an interpretation is not based on the evidence itself, but entirely on the presuppositions of the claimants. The evolutionist scientist has no reason to doubt carnivory in the fossil record, and, indeed, *much to lose* if it is not there. The vast majority of 'evidence' for carnivory in the fossil record consists of finding animals that are now considered carnivores—or animals such as *T. rex* with apparent design similarities to current carnivores—and declaring them as carnivores. But as Dr Veith pointed out, that is a completely invalid approach, because many current animals that seem to have clear carnivorous features are instead entirely herbivorous. Furthermore, establishing Biblically that God instituted carnivory in the post-Flood world does not preclude the possibility that some animals scavenged from the carcasses of animals that died of other means before the Flood.

Much ado has been made lately over the finds of a coprolite, suggested to come from a *T. rex*, that contained the bones of a smaller animal. Yet, even assuming that this could be proven, it does not in any way establish *when* it occurred, or *how* it occurred. In most 'scientific' scenarios it had to have been more than 65 million years ago because this is when *T. rex* is assumed to have died out. Such an interpretation however presupposes the fictional nature of the Biblical account of a global Flood as well as the revealed timeframe that was involved. For that matter, any coprolites *could* have been formed centuries, even millennia, *after* the Flood if *T. rex* survived the Flood (which, according to Scripture, he did). In fact, such an explanation makes a coprolite survival far more conceivable. Unless a particular coprolite is part of a vast sedimentary fossil layer that is clearly a remnant of the Noahic Flood deposition, there is simply no way of eliminating the possibility that it was formed in a local event long after the Flood. The Biblical record should not be manipulated to encompass the so-called finds of science; the finds of science need to be evaluated in light of the revelation of Scripture.

Summary and conclusion

In summary, the Scriptural account establishes the created diet of both humans and land animals as herbivorous. The diet for mankind was specifically pronounced by God to remain the same after the Fall, even though man now had to toil against thorns and thistles. There is no theological or physiological reason to therefore insist upon a carnivorous diet for animals at this juncture. People had consistently long (vast!) lifespans before the Flood, and this was dramatically changed in the generation that went through the Flood. I believe that such change was directed by God to limit the effects of evil people upon the world as well as to cope with the completely changed environment after the Flood. The physiological change was proclaimed by God before the Flood (Gen. 6:3), and directed to take place over several generations in order to allow the world to be repopulated. It is also after the Flood that mankind is specifically given a new diet by the Creator Himself. If man, who had the same diet as animals, had no reason to eat animals before the Flood, then there is no Scriptural or physiological reason to insist that animals had this need or nature.

In the same way that the human lifespan was genetically redirected, carnivorism was instituted for both humans and animals after the Flood. This process probably took several centuries to be fully realized, in order to allow the animal populations to become large enough and stable enough to sustain carnivores. This certainly may have involved genetic changes (whether ‘directed’ or ‘allowed’ it was nevertheless ultimately God’s doing). John Woodmorappe recognizes that many specialized diets quite likely arose ‘only since the Flood through microevolutionary changes in the Animals—the result of variation within the created kind [italics in the original]’.²⁶ Clearly, such ‘specialized’ diets cannot preclude carnivorism.

The ‘fear and dread of mankind’ was also clearly a new feature of the post-Flood world and directed by the Creator Himself. It is certainly reasonable to assume that there was no ‘fear and dread’ before the Flood because there was no need. After the Flood, as genetic changes began to take effect on both humans and animals, lifespans began to diminish, diets began to change, and fear and dread were initiated to protect both the small population of humans as well as the surviving animals. The fear and dread would have caused the animals to disperse and allowed for populations to both grow and stabilize. With enormous environmental changes and a greatly reduced flora covering the Earth, carnivorism became part of both nature and need. Noah neither fought with, nor fed meat to, carnivores—nor did he require God’s continuous intervention to prevent carnivores from killing either himself or each other—precisely because they were still herbivores.

References

1. The creatures that ‘have the breath of life’ in them are specifically land animals—those that breathe air and dwell in the same environment as mankind. Whether this admonition would also apply to sea creatures such as sharks may remain as a topic for debate. At face value, however, since the ‘fear and dread’ of mankind that was initiated by God after the Flood (Gen. 9:2) specifically included sea creatures as well as land animals—and it was at this time that fish were also given to man as his food—I believe that sea creatures were also governed by this admonition until after the Flood.
2. For instance, in the fossil strata have been found much larger plants than currently possible, and even a frozen fruit tree in Siberia that was 90 feet tall; cf., Brown, W., *In the Beginning: Compelling Evidence for Creation and the Flood*, 6th ed., Center for Scientific Creation, p. 111, 1995. Some Christian commentators have tried to maintain that the devastation of Siberia and Alaska were post-Flood catastrophes, but this is untenable for numerous reasons. The devastation is continent-wide, and includes frozen forests of tropical trees as well as numerous un-fossilized dinosaur remains; cf. Davis, B., Liston, M. and Whitmore, J., *The Great Alaskan Dinosaur Adventure*, Master Books, Green Forest, AR, 1998.
3. As one example of the evidence consider the following: ‘Though the ground is frozen for 1,900 feet down from the surface at Prudhoe Bay [Alaska], everywhere the oil companies drilled around this area they discovered an ancient tropical forest. It was in a frozen state, not in petrified state. . . . There are palm trees, pine trees, and tropical foliage in great profusion. In fact, they found them lapped all over each other [1,100 feet to 1,700 feet down], just as though they had fallen in that position’; in: Williams, L., *The Energy Non-Crisis*, 2nd ed., Worth Publishing Co., Kasilof, Alaska, p. 54, 1980.
4. For much more similar evidence in Siberia and elsewhere, see also, Velikovsky, I., *Earth in Upheaval*, Doubleday, New York, 1955. The evidence clearly and consistently indicates sudden and cataclysmic destruction on a massive scale by water—the Flood of Noah and no other.
5. Fossilized tropical plants are found in numerous places now continuously buried in snow and ice. For example, many tropical plant and exotic tree fossils have been found in Greenland, cf. Velikovsky, Ref. 4, pp. 43–46. Numerous tree remains are found in the frozen tundra of Siberia where now nothing of the sort will grow, cf. Brown, Ref. 2, p. 111. Also, Sir Ernest Shackleton, one of the earliest Antarctic explorers, noted the presence of coal seams in the cliffs of the unexplored regions of the Antarctic. According to his observations, ‘This proved that in some bygone age this desolate spot had had a mild, and perhaps tropical climate, which had produced luxuriant vegetation’; in: Worley, F.A., *Endurance*, W.W. Norton & Company, New York, p. 284, 1931. These coal seams were caused by the Flood, not after the Flood.
6. It is possible that the very large size attained by some dinosaurs may be due in part to achieving a vast age. Cross-sections of ‘modern’ crocodiles’ bones have shown structures called ‘Haversian canals’ in some very old specimens. However, certain dinosaur bones have been found to be replete with these structures. This may imply their having lived to great age. This coincides as well with the pre-Flood genealogies of men, cf., Unfred, D., *Dinosaurs and the Bible*, Huntington House Publishers, p. 27, 1990.
7. Using the Hebrew text of Genesis 5, there are 1,656 years from Creation to the Flood.
8. Since man was said to be increasingly evil, and since we know that murder occurred at least in one instance and undoubtedly many more, it is clear that men could have killed animals as well. This has no bearing on whether or not animals killed other animals or whether animals had the need for carnivorous appetites.
9. I would contend, for instance, that Genesis 6:3 (‘My spirit will not dwell within man forever, for he is corrupt. His days will be 120 years’) is God’s pronouncement *in advance* that genetic change is coming to mankind in the form of shortened lifespans. It is clear from science and medicine that such is the case today. Other commentators prefer to see Genesis 6:3 as the length of time allotted to man before the advent of the Flood.

Though it is beyond the scope of this article to debate the interpretation here, ultimately, whether the reduction in lifespan was entirely due to environmental causes, or uniquely supernatural direction (or some combination), it *must* be seen as God's directive purpose. Clearly, genetic change *did* take place, beginning in the generation of Noah's sons, and continued for centuries beyond. It is simply not possible to contend that such change caught the Creator by surprise.

10. One question that has been asked of me is 'Why should a wolf, leopard, or lion fear a child?' And the answer is that before the Flood, they did not, because they were not carnivores. After the Flood, fear was instituted precisely for this reason; to spare the children: carnivores that did not fear humans would tend to eat them—especially children!
11. Personal communication.
12. Some commentators have argued that man's superior intellect would always enable him to defeat any number of vicious carnivores whatever the odds. But remember, if Noah and his sons were forced to defend themselves by killing even one lion, it would have been the end of all lions. Noah was commanded to bring two of every kind, and seven (or, perhaps fourteen) of every 'clean' kind of animal as well as birds. Most interpreters would not include 'carnivores' among the clean animals.
13. Woodmorappe, J., *Noah's Ark: A Feasibility Study*, Institute for Creation Research, El Cajon, 1996. According to his research, most current carnivores can easily survive for the necessary duration of their stay on the Ark on a vegetarian diet. Others, according to him, may have utilized previously prepared dried meats.
14. Genesis 7:2 states, 'Take with you seven of every kind of clean animal, a male and its mate, and two of every kind of unclean animal, a male and its mate . . . ' (NIV). The Hebrew literally reads 'seven seven' clean animals. Since this is immediately followed by, 'a male and its mate', I believe this means seven pairs of animals. The following reference to 'two of every kind of unclean animal,' does not follow this construction (two two), and more likely means only one pair. Some say that this construction does not require 14 animals but, instead, three pairs of animals with one extra to sacrifice after the Flood argue; cf. Michael Kruger quoted in: Ham, K., *The Great Dinosaur Mystery Solved*, Master Books Inc., Green Forest, pp. 128–129, 1998; or Morris H., *The Genesis Record*, Baker Book House, Grand Rapids, p. 191, 1998. I would contend that seven sevens, 'a male and its mate', literally means seven pairs because seven animals cannot be divided into pairs of male and females. In several places it is reiterated that all animals and birds are to be taken onto the Ark in pairs, a male and its mate. Nowhere is there any indication that some animals were taken onboard unmatched or singly. It is not necessary to debate the construction here because if I am wrong in this regard, it only serves to strengthen my overall case by diminishing the number of animals available to carnivores as their food after the Flood.
15. For a differentiation between clean and unclean animals see Lev. 11 and Deut. 14. The main requirements mentioned for 'clean' animals were that they had a completely divided split hoof, and they chewed the cud.
16. Personal correspondence, 12 January 2000.
17. Personal correspondence, 13 January 2000.
18. His actual statement notes that 'We have only a fraction of the flora and fauna that were there **at first**—the fossil record bears that out [emphasis added]'; in: Veith, W., *Professing Creation*, *Creation* 22(1):37, 2000. I take his 'at first' comment to mean 'at Creation', but since he is establishing the vast difference between then and now by referring to the fossil record, it would be more accurate to say 'before the Flood'. Clearly, he understands the fossil record to have been left by the Flood and not by the Fall. The Flood was ultimately a later consequence of the Fall, but in time they are separate events.
19. Veith, Ref. 18, pp. 37–38.
20. Veith, Ref. 18, p. 38.
21. Velikovsky, I., Ref. 4, p. 65. Interestingly enough, Velikovsky also men-

tions that, found in a layer of the tar pits, was a human skull—assumed to be from the so-called 'Ice Age'—with no deviation from that of a modern Indian. It was found in layers under that of an extinct species of vulture (cf. pp. 66–67). Clearly, humans existed on the American continent along with saber-toothed tigers and they were destroyed together.

22. The Fauna of Rancho La Brea, *Memoirs of the University of California*, I(2), 1911, cited by Velikovsky, Ref. 4, p. 65.
23. Such was the case with Piltdown Man which, from 1911 to 1953, occupied the 'best evidence' position in the public proclamations of evolutionists. For example, from the New York Times' headlines of 22 Dec. 1912: '*Darwin Theory Proved True; English Scientists Say the Skull Found in Sussex [Piltdown Man] Establishes Human Descent from Apes*'.
24. Erickson, G.M., Breathing Life into *Tyrannosaurus rex*, *Scientific American*, 281(3):46, 1999.
25. Webster, D., A Dinosaur Named Sue, *National Geographic*, 195(6):57, 1999.
26. Woodmorappe, Ref. 13, p. 116.

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