

so far as it goes. But his argument does not go far enough. Consider man: he is an obligatory carnivore, not on the grounds of his teeth, but biochemically. If he does not occasionally eat meat or animal produce (for example, milk, cheese, etc.) then he usually suffers from B12 deficiency anaemia. There is no other dietary source for man, or woman. While I consider that Stambaugh's reading of Scripture is correct, I would like to understand why the Lord so changed man, woman and female mosquitoes, which use blood as a source of needed nitrogen for egg production, as Stambaugh notes. Only if all mosquitoes developed from the nectar suckers can we argue that such blood sucking is degenerate and a result of the Fall. Is there enough nitrogen in nectar, which is mainly sugar, for the non-blood sucker mosquitoes to develop their eggs, or do they use a different mechanism? And if so, why?

A consequence of vegetarianism for all is to profoundly alter population dynamics, since such things as predation disappear. Could the appearance of predation be enough to explain certain extinctions? It may be possible to quantify some of this and therefore explore the way the Fall has affected zoology. Chaotic population dynamics, a fairly new field,<sup>2,3</sup> may help in this.

Is the basic mechanism of the Fall summarized by the well-known Irishman, Murphy — '*What can go wrong, will!*'?

## REFERENCES

1. Stambaugh, J., 1991. Creation's original diet and the changes at the Fall. *CEN Tech. J.*, 5(2):130-138.
2. See as an introduction to chaos, J. Gleick, *Chaos*, London, Cardinal, Sphere Books, MacDonald & Co., 1988.
3. Degn, H. and Holden, A., (Eds), 1986. *Chaos in Biological Systems*, Plenum Press, New York.  
This may be useful too — I have not yet seen it but it was recommended to me as a useful book for my own medical area.

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## The Author Replies ...

I want to thank Dr Stewart for his comments on my article. He has rightly observed that what I am suggesting in my biblical model is a different way of looking at the world. In many ways the questions are difficult to deal with because either no one has done it before, or we may not have the data available to us.

Dr Stewart points out that a problem with this model may be potential vitamin B12 deficiency. It is true that we humans may live very well on animal products such as milk, cheese, etc. As a case in point, many Seventh Day Adventists are vegetarians but substitute these animal products in place of meat, and they do not suffer from a B12 deficiency.

He raises a good question in terms of the mosquito and

the need for nitrogen to produce eggs. It very well may be that today, the only source for egg production may be blood. This may have taken place at the time of the curse, or through the process of adaptation to the cursed world. The point that I am trying to make is that we as creationists need to place the Fall and curse of Genesis 3 into our model and ask such questions. The issue of the mosquito would be a worthy study.

Dr Stewart raises another good point as he suggests the correlation between predation and extinction. I do not know of anyone who has examined the fossil record, or today's world with this question in mind. I would suspect that we should be able to find some correlation. Yet, most of the extinctions that currently take place are because of man's abuse of God's creation.

I would like to work with any creationist interested in exploring these questions.

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## EARLY HISTORY OF MAN

Dear Editor,

I have read with interest the accounts of dinosaur-like creatures in Bill Cooper's 'Early History of Man — Part 4'.<sup>1</sup>

In particular, I noted one reading of the name Grendel as a species name. One possible meaning is from Old Norse *grenja*, 'bellow', according to Cooper. My Oxford English Dictionary supports this meaning, under the heading 'grin', which has a common root with 'grunt' and 'groan'. (It seems that the origin of 'grin' is, surprisingly, related to gnashing one's teeth rather than to laughter.)

In my Hebrew studies I came across a similar meaning in connection with Hebrew *t-n-n*, supposed root of *thannin* and related words which may refer to dinosaurs. This Hebrew root is said to have a basic meaning 'howl', which is probably why it has been applied, rightly or wrongly, to jackals as well as dinosaurs.

In this connection it should be noted that popular biological nomenclatures are notoriously subject to confusion and straddle two or more phyla. Thus English 'elk' is not only applied to deer but to an epiphyte. Even better known are terms like 'horse'-fly, 'dragon'-fly, etc., where the connection seems quite arbitrary.

My main point, however, is that the characteristic of howling, groaning or bellowing appears to apply to some dinosaurs of the past, if we are to make an association between old Norse *grenja* and Hebrew *t-n-n*, both applied to large dinosaur-like creatures. The fact that the languages

and environments are unconnected lends strength to the possible significance of the semantic association.

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#### **REFERENCE**

1. Cooper, W. R., 1992. The early history of man, Part 4. Living dinosaurs from Anglo-Saxon and other early records. *CEN Tech. J.*, 6(1):49–66.