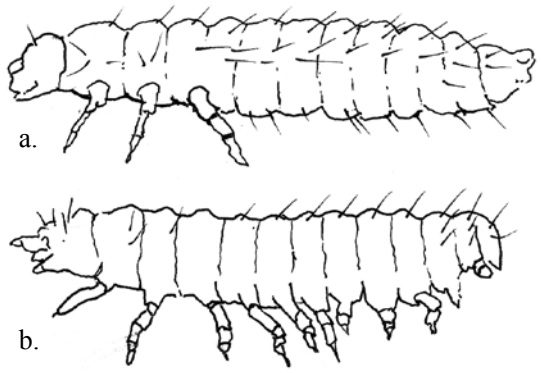

Figure 2. *Flour beetle larvae. a) Wild type, b)* Ubx – abd-A *mutated larva with 16 abdominal legs (after Lewis, DeCamillis and Bennett).*[3]

Although a beetle larva can be persuaded to produce legs on its abdomen, this is hardly support for evolution. It only confirms the role of particular genes in leg development—it is well known that in insects every segment has the potential to form a limb.[5] But the type of limb, or whether or not it forms, is determined by the individual Hox genes—in the fruit fly *Drosophila melanogaster*, a particular appendage (leg type or antenna) in a segment is specified by a pair of Hox genes.

Conclusion

Even the idea of mere insect evolution is inconsistent. Evolutionists are perplexed as to how evolution could have produced such huge morphological variation among insects, especially considering how highly conserved Hox gene expression is within this lineage.[3] The Scriptures plainly describe that all creeping things, which includes insects, were created complete on the same 6th Day of Creation to multiply after their own kind.

Evolutionary dogma interprets similarity as phylogeny. The genome of the fruit fly *Drosophila* has recently been sequenced.[6] With the elucidation of the complete DNA sequence of more insects in the future, the lack of phylogeny will become clearly evident, as has been recently documented among microorganisms.[7,8] This will result in the further collapse of the ailing evolutionary 'tree of life', as insects believed to be lower or higher in the tree are seen not to be connected by consistent lines of descent. One wonders whether multiple origins of insects ('Creationist orchard' again) will also be proposed as this unfolds.[8]

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Food scare leads to design discovery

Don Batten

The idea that nitrates cause stomach cancer gained credence in the 1980s. Environmentalists made a tenuous connection between nitrates, nitrites and nitrosamines, the latter considered to be carcinogenic. The resulting public health scare resulted in many governments substantially reducing the legal limits on the amount of nitrates and nitrites allowed in food and water. Nitrites were the major preservative for all sorts of foods, particularly manufactured meats.

Are nitrates/nitrites dangerous? Epidemiological research in the mid-1980s failed to find any evidence of health risks.[1] People who eat lots of vegetables (a major source of dietary nitrate), or drink water high in nitrates, do not have elevated stomach and bowel cancer rates. Indeed, workers in a factory producing ammonium nitrate fertilizer had no indications of elevated cancer risks and were actually healthier than other factory workers in the area.[2]

Since the big scare of the 1980s, research has filled in the picture in a remarkable way. It would now appear that, rather than being bad for healthy people, nitrates/nitrites are actually part of our body's defence systems against disease-causing micro-organisms. It works in the following way.[3]

Nitrate from food (leafy vegetables, especially) is released into the mouth through chewing. Nitrate is also produced within the body and circulates in the blood. If insufficient is released from eating, extra is excreted in the saliva. Anaerobic microbes, such as *Staphylococcus sciuri* and *S. intermedius,* in deep pockets in the back of the tongue, reduce the nitrate to nitrite. The nitrite is swallowed, ending up in the stomach. The acidity of the stomach results in the conversion of the nitrite to form large amounts of nitric oxide (NO) and other oxides of nitrogen. The conversion to NO is so

rapid that there is no measurable rise in nitrite concentrations in the stomach following ingestion of nitrate.[4] This means that carcinogenic nitrosamines are ***not*** formed from nitrite in the stomach.

Acidified nitrite and NO have been shown to have strong anti-microbial activity on a wide range of micro-organisms, including pathogens such as *Salmonella* and *Yersinia*, common causes of gastro-intestinal disease following the consumption of contaminated food ('food poisoning').

Statistics on food poisoning show that there has been a substantial increase in reported cases of food poisoning in Britain, for example, since 1987, about the time that maximum nitrite and nitrate levels allowed in food and water began to be reduced in earnest.[2] The reduction in the allowable levels of nitrite has undoubtedly made it more difficult to control microbes that cause food poisoning and has probably contributed to the increase in reported cases of food poisoning. The food scare of the 1980s has almost certainly indirectly resulted in the deaths of people from severe food poisoning.

NO also has vasodilatory properties (reducing blood pressure) and is involved in controlling platelet activity,[3] and so could be a (positive) factor in the heart disease story. Many functions of NO in cell signalling are being discovered.

Far from being poisons, nitrates and nitrites are part of normal mammalian physiology. Nitrites are generated by microbes in symbiotic relationship with us, and are converted to gaseous oxides of nitrogen that have a sterilizing effect in our stomachs. The system is therefore a non-immunological line of defence against invasion by microbes. It seems like a nice example of highly integrated (intelligent) design that involves symbiosis between microbes and mammals. McKnight *et al*., conclude from their review of the subject, that 'dietary nitrate may have an important therapeutic role to play'.[3]

Some of the most important bacteria responsible for this symbiosis involving nitrates are forms of *Staphylococcus*. This may be relevant to the origins of pathogenesis in microbes. Many human pathogens are very similar to free-living or saprophytic (feeding on dead organic matter) forms that do not cause disease. Here is a case. *S. aureus* is probably the major cause of infections in hospitals, but *S. sciuri* and *S. intermedius* help us ward off gastro-intestinal infections! Another example is *E. coli*. Normally an abundant harmless resident of our bowels, *E. coli*'s presence helps us by suppressing harmful microbes, as well as synthesising vitamins. However, the O157:H7 strain has caused deaths from food poisoning. There are many other examples of bacteria that have harmless forms and pathogenic forms. It is quite possible that pathogenic forms arose by degenerative changes to the harmless forms.

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New radiohalo find challenges primordial granite claim

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Although radiohalos are tiny, they have generated a big debate about Genesis, geology and granite. Radiohalos were first brought such prominence when Robert Gentry, the world's leading researcher on halos, claimed they were evidence of an instantaneous, supernatural creation of granite.[1] They were launched into international distinction when Gentry testified to this claim at the Arkansas Creation Trial in 1982.[2] And they are still the cause of controversy with books, articles and web pages devoted to the pros and cons of Gentry's original arguments.[3–6]

Now a new find of polonium radiohalos major implications for the interpretation of their origin.[7]

Radiohalos are concentric, discoloured circles observed under the microscope in translucent minerals such as biotite, muscovite, fluorite and diamond (Figure 1).[2,8] It is generally accepted that they were formed by the alpha decay of radioactive isotopes (Figure 2). The emitted alpha particles damage the mineral, especially at the end of their path when they finally run out of energy and grab electrons from nearby atoms. They leave a spherical, discoloured region, which in section appears circular. Radiohalos can be erased when the host mineral is heated, even at temperatures as low as 250°C.[9]

Radiohalo types

Gentry describes four types of radiohalos, each with a different number of concentric rings (Figure 2).[10] They have been related to the ^{238}U decay series (Table 1) in which eight of the isotopes in the series liberate alpha particles when they decay. Each of the four types of radiohalos has been linked to a specific parent isotope in