

Re: Why Were Prehistoric Insects Huge?

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- *From:* Darwin123 <drosen0000@xxxxxxxxxx>
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On Aug 11, 8:52 am, BradGuth <bradg...@xxxxxxxxxx> wrote:

On Aug 10, 8:03 pm, "George" <geo...@xxxxxxxxxxxxxxxxxx> wrote:

Too much O2 is actually bad news for life as we know it.

Agreed.

So may being a larger size is one way to protect oneself from it. If one has a larger size, the diffusion of oxygen through the organism is slowed down by the smaller ratio of surface to volume. So in a period with high oxygen, one large animal may be better adapted than a herd of smaller animals. So maybe that is why there were more large animals in the mesozoic. More oxygen encourages size, not productivity. Big is not necessarily "good news for life as we know it." Big is merely a defense.

Maybe other features evolved to protect smaller animals from the high oxygen content. Like maybe a faster reproduction rate. A small animal could survive for a while in a high oxygen atmosphere, but it would suffer all sorts of corrosive stress. If oxygen kills an organism quicker (free radicals and all), maybe it shortens the life span. So maybe a faster rate of reproduction makes up for this. Maybe warm blooded metabolism helped speed up the reproduction rate. This way, a mammal could reproduce even during the winter. It needed every extra minute, because its lifespan was shorter. So maybe the warm blooded metabolism was also a response to the high oxygen content. My point is that extra oxygen would have really big biological impact without violating any laws of physics. We really don't need a changing gravitational constant to explain evolutionary trends.

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