Re: Darwin, Evolution, the Animal Kingdom, and Man

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From: Wolf Kirchmeir (*wwolfkir_at_sympatico.ca*)
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Lester Zick wrote:
[...]
>
> I find myself wondering if there are any biological evolutionary
> mechanisms other than random mutation mechanisms of natural selection?
>
> Regards − Lester

Don't wonder, read. You'd find out, eg, that the expression of genes depends on the organisms' environment, which means that inactive "legacy genes" may become active when the environment changes. Contrarywise, a stable environment tends to prevent evolutionary change, since mutations are more likely not to have a beneficial effect; but some mutations survive because they have no effect, and may come into play when the environment changes; and so on. Or that genetic drift is a powerful weeder−out of genes, some of which might have enabled an organism to survive environmental changes. Or the fact that most genes code for only part of a protein, and that genes must be cut and pasted to make the the sequence that produces a particular protein. That's important because the cutters and pasters are RNA molecules, which are more likely to respond to environmental inputs that DNA molecules; which in turn means that environment can cause changes in the organism, albeit in a very roundabout way. Or that bacteria appear to have a mechanism that rnadomly rearranges DNA, which appears to be a major factor in the development of antibiotic resistance. And so on. It's much more complicated than random genetic mutation. {Any errors in the above are my own.}

Bottom line: evolution is the effect of the interaction between genes and environment. Neither can work withouit the other.