

Re: No island fossils

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- *From:* Lorentz <drosen0000@xxxxxxxxxx>
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On Mar 1, 1:13 am, Tim Tyler <seemy...@xxxxxxxxxxxxxxxxxx> wrote:

Most of my recent, brief essay on why islands leave relatively few fossils is presented below:

Islands are important as crucibles for new species, and it seems reasonable to expect that much of the world's gradual evolution has taken place on them.

However islands leave relatively few fossils.

Many islands are volcanic – and fossils tend to prefer to take up residence in sedimentary rocks.

Many other islands are eventually eroded and crumble into the sea. This must be an extremely common fate of small islands. Such an island will leave no fossils.

There is a spot in New Mexico where the fossils are supposed to be from an ancient lagoon in the Pennsylvanian era. The Kinney Brick Quarry, Late Pennsylvanian, in Central central New Mexico provides a range of fossils of both animals and vegetation which I was told seem characteristic of lagoon life.

I went there and all I collected was a teleost fish scale, with the rest of the fish missing. Therefore, I can't really tell why anyone would think these different from any other marine fossil. I suspect the vegetation found there may provide a clue.

In any case, this would be a sort of island fossil. Lagoons are "ring islands." I don't know how isolated such life would be.

I think terrestrial mountain ranges of any type would provide as much isolation as islands, which are just underwater mountains anyway. The reason is the climate changes radically going up the mountain. The flora and fauna change radically going up the mountain. Unless they evolve to adapt to other climates quickly, in the face of fierce competition, they are stuck. They can evolve all sorts of ways different ways. The climate can change allowing them to leave their zone and mix with different subspecies on different mountains, allowing more radical changes. We may see some of this happen as

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global warming commences, regardless of what is causing it. Also deep trenches in oceans. They can isolate species for a long time.

I recently saw a Discovery channel special where scientists climbed a steep plateau near the Amazon river. All sorts of radically altered creatures lived on top of the plateau. Alas, no dinosaurs which one was looking for. But these really odd spiders. Granite chomping bacteria were found in a cave, forming silica stalactites. That is pretty weird. I think the weird variations on this plateau was far greater than anything Darwin found in the Galapagos islands. I don't think "islands in the sea" are actually the most productive means of isolation for stimulating evolution. The sea surface provides a rather convenient road for certain forms of life. Komodo dragons, for instance, swim from island to island. Coconuts float from island to island. The sea surface tends to homogenize climate.