Page 33 - C.B.'s Geology: A Talk on the Rocks!
ISSUE : Issue 62
Published by Ronald Caplan on 1993/1/1

America were joined to? gether; there was no At? lantic Ocean between them at that time. So you can imagine this great sideways motion of North America moving northwards to the right. South America moving southwards to the left, out of the way, and Afri? ca moving in in place of it. All that area of Nova Scotia which lies south Sedimentary rocks of a line from Canso to Truro • that's a portion of Africa. We refer to it as the Meguma terrane. The rocks that we see in Nova Scotia today are like rocks in Morocco. (So we're not simply saying that it's the same rock that you would find there. We're saying, it is a portion of Afi*ica that has remained here when the rest of Africa split away.) That's right. (And we're not saying that these are like the rocks of South America, here along the Mira coast or Fram? boise or Louisbourg. We're not saying it's very similar. We're saying, it is the same thing as a portion of South America that tore away when South America itself went in? to place.) That's what we're saying. A diagram showing subduction: the oceanic crust plunging beneath the edge of a continent Two large fragments of continents come together- just like two cars meeting head on, wore down.) Yes. As they wore down, and as any holes opened up in them, we had sediment being deposited. Every time you get a bowl-shaped depression in the surface of the earth, it fills up with sediment. At first it was the sandstone, because the mountains were very high. Then we moved into a period when Cape Breton had moved a Httle bit further north (into) equatorial lati? tudes • somewhere around about the latitude of Brazil or Zaire today. Hot, sticky, lots of precipitation. And much of the moimtains had really These rocks in the Louis? bourg area actually were formed on the west coast of ancient South America. When South America slid out sideways out of the way, these rocks were left behind, as a souvenir of South America's visit to Cape Breton! (And once again, here in the north we're looking at the for? mation of the Pre-Cambrian Shield.) Which is part of North America, and is very similar to Pre-Cambrian Shield rocks still exposed in Labrador and Quebec and Ontario today. So we have these large forces with continents moving side? ways. And when continents move sideways, inevitably there are going to be little irregularities: bits that stick out into the ocean or bits that stick out into the other continent. It's not a clean cut • it's a very ragged tear. And as a result, there are lots of little basins that oi)en up • 'little holes that seem to open up in the continental crust. And these were the basins that very quickly filled up with the sediment that was being eroded off the mountaintops. Sandstone. Limestones and gypsum of the Windsor group. These were sediments, (As those Himalayan mountains been worn away by this time. This would perhaps be about 20 or 30 million years later. We're looking at a period about 350 million years ago. And a shallow arm of the sea at the speed of 10 centimeters a year flooded across much of North America. It extended proba- ...for 20 million years. Wy in a-om both coasts • from the eastern Chinese coast and the western Califomian coast. And this arm of the sea was periodically cut off from the main ocean. And as a result, the seawater would all evaporate away. And we were left with big deposits of gypsum • 'the calcium sulfate formed. And (you see) these

deposits of gypsum well exposed on the Cabot Trail at Cape North. And you see them particularly well in the cliffs at Big Harboiu*. It's mined at Little Nar? rows. That g3T)siun was all deposited in a very shallow sea sitting on top of the continent; in a downright hot environment. Eventually thcfee seas filled up with more mud and more limestone and more sediment, and we ended up getting the coal measures of Cape Breton • of the Sydney and Glace SIMEON'S II Family Restaurant 427 Grand Lake Road, Sydney GILLIS tibmecare 'BUILDING CENTREBHH of)cciaiim' IK no(iS& Pac??a'e' So t/ve nard-To-find imm'Wi THAT NEW HOME CALL US FOR AN ESTIMATE FLOOR & ROOF TRUSSES KINGS ROAD, SYDNEY RIVER 539-0738 We Feature: • Full Course Meals • Fresh Seafood • Steaks • Chops • Ethnic Dishes • Homemade Pies Baked Fresh Daily Come in! We would love to serve you! 562-0251 SIMEON'S Restaurant & Tiffany Dining Room FULLY LICENSED Piummer Ave., New Waterford 862-8090 • 862-8093 We feature the same great food as Simeon's II & we have large Banquet Facilities & Lounge