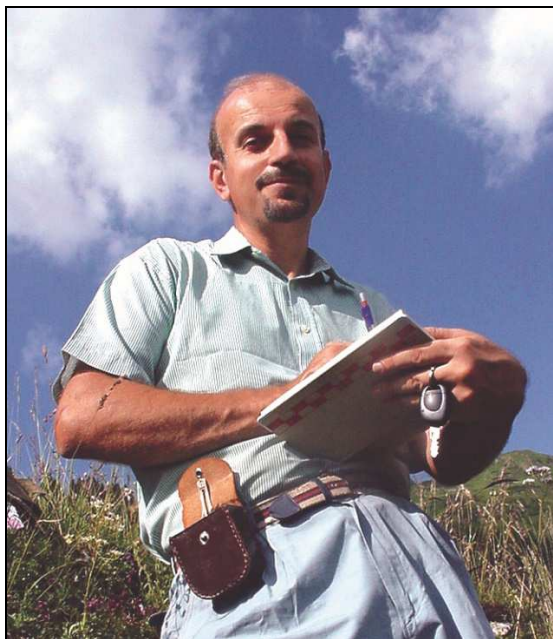


## My Earth science educator story – Corrado Venturini

### What I did, why I did it and what happened



Fieldwork in the Carnic Alps, 2002.

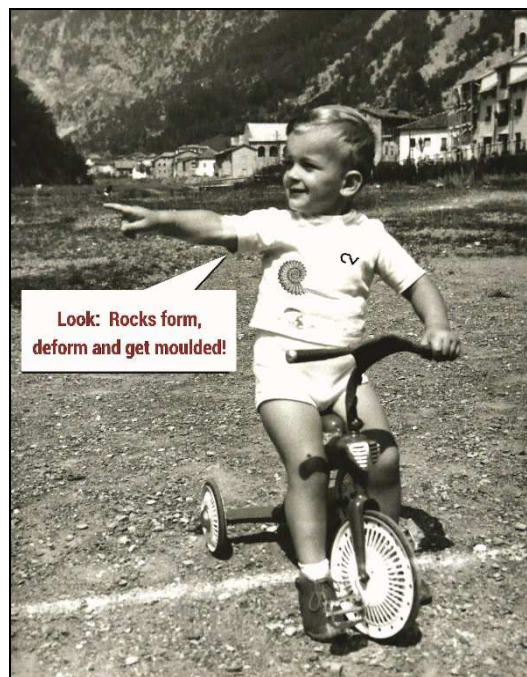
Nobody knows what the future will bring, yet everybody tries to imagine what it might be. When I was a young student of geology at Bologna University (Italy), I never thought that my future might be as a science educator, despite coming from a family of plenty of school teachers, mainly primary school teachers.

### Going back in time

On the day I was born, my father looked at me and muttered softly: *"Mhmm... another school educator?"* His voice was very low but I was able to lip-read what he said. I wished I could have answered him: *"No problem, dear Daddy. Be cool: the last thing I'm thinking of is that kind of career"* but I was so exhausted that I said nothing.

Five years later, in primary school, my father was my teacher, and showed me and the other kids the wonders of nature and its processes, in the field. I was a lucky boy, I lived in a small mountain village in the centre of the Carnic Alps of North East Italy, surrounded by ancient Palaeozoic fossil-rich layers. A large karst spring gushed from

the Devonian rocks beside the school and a small stream, full of glittering stones, flowed beneath the balcony of my house. I realise that my keenness for field geology began in primary school, and this never changed over time, even though more than half a century has gone by.



Look: Rocks form, deform and get moulded!

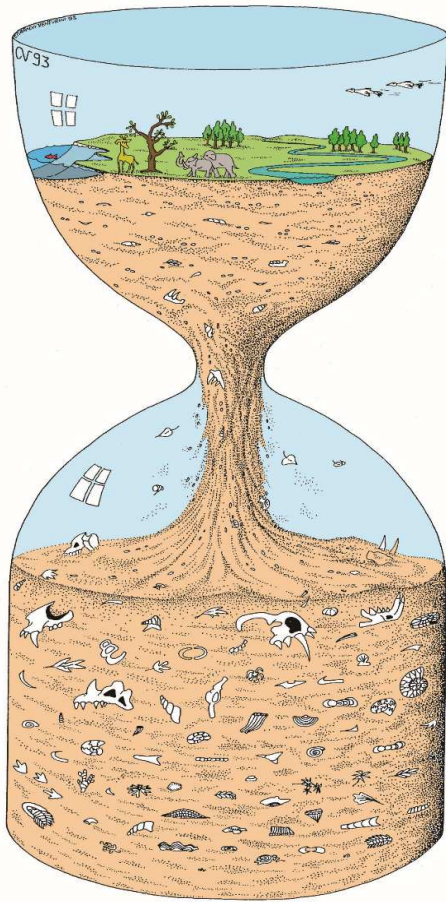
In my small village, as a two-year-old child, I was already intrigued by rocks! 1957.

When I enrolled as a student in the graduate Earth sciences program, I had a secret fear that I would lose my flair for graphics and my small talent for writing. I also thought I might lose my natural inclination towards fantasy. Despite these initial doubts, my love for geology carried me forwards.

### An unforeseen surprise

A few years after my master's degree I began working at university and became involved in basic research. My work was aimed (and still is) at looking into the evolution of palaeogeography over time. My main focus was on reconstructing Palaeozoic and Mesozoic ancient environments,

together with Variscan and Alpine tectonics and ancient morphological scenarios, from Late Miocene to Quaternary times.



Over geological time, sediments become layered rocks, 2006.

My research began in the lovely Carnic Alps, near the glacial valley where my own village nestles. Gradually, my studies extended to the whole of North East Italy and occasionally to the Northern Apennines, Corsica (France) and the Asturian Range (Northern Spain). My intensive fieldwork studies continued for more than 30 years. Meanwhile my experience and enthusiasm grew. I soon realized that my interest in graphics might give 'added value' to my academic papers. I discovered that a good geological sketch can be equivalent to a whole page of text.

Early on my career, in 1983, I had the opportunity to experience the popularising of Earth science, when together with two young colleagues organized a special

exhibition. The public responded well (with 52,000 visitors in one year) partly because we used a new way of conveying geological information. This involved telling a step-by-step story of the region, using fossils and rocks for environmental reconstructions in ways that were clear and easy to understand.

### A turning point

After this unexpected result, all my energies were channelled into field research for the next 30 long years, with only occasional opportunities for popularisation and outreach activities. However, I soon realized that teaching and popularisation are part Of the same educational goal.

Since the year 2000 I have integrated my regular university lectures with a different university graduate school course. My task in this new class was to teach high school teachers how to explain geological concepts to their students through using innovative tools and strategies.

In doing this, I often think:

*This has been really a powerful experience, which has allowed my learning to grow alongside that of my 'graduate students'.*



The layers of this classic *lasagna*, when cooked, deform like layered rocks when they get heated up deep within Earth's crust.

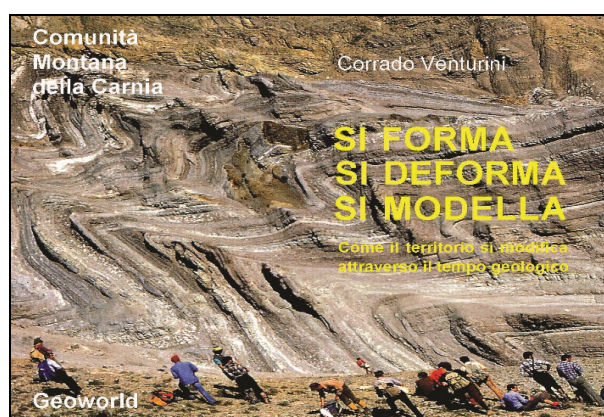


In 2005 – partway through my ‘powerful experience’ of helping high school teachers to teach geology engagingly – I had a sudden epiphany, I realised that I should share the amazing feeling of learning about geology, with a larger audience. I realized I could use the same strategies I had devised for my students to engage with a wider public of non-experts.



Cakes and rocks. These three data sets can explain and summarize all Earth science processes. An explanatory panel (180x100 cm) from a permanent exhibition, 2015.

In the past decade, thanks to municipal and communal institutions within the Friuli Venezia Giulia Region (which have always been open to the popularisation of Earth science) I have had the opportunity to publish several books and set up exhibitions targeted at students, teachers and the public at large.



A volume popularizing Earth science, 2010.

I have always used a non-conventional approach, using examples and situations from everyday life to enhance

the effectiveness of learning.

I realised that geological discoveries made over many years of hard fieldwork could be used to craft geo-messages and geo-stories. I was able to enter a new and exciting geological youth! From then on, I knew my teaching locations wouldn't be just classrooms, but also museum halls, auditoriums and the local region itself.

### Efforts and results, using non-conventional tools

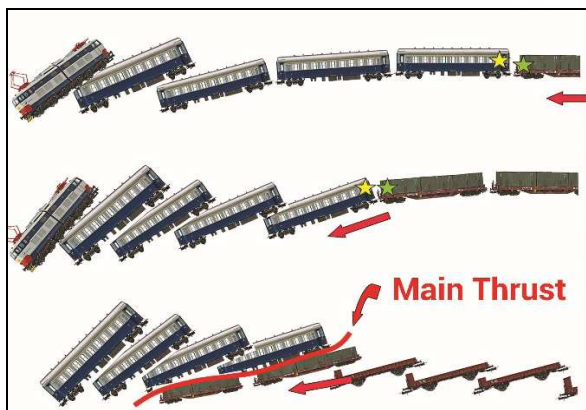
Geo-information was conveyed through 'new-generation' explanatory panels in museums, dynamic PowerPoint presentations in auditoriums (during geo-talks), posters and everyday materials, introducing students to natural geological processes.



Everyday materials (*i.e.* towels) used to illustrate geological processes. This example (in plan view) relates to the distribution and interference of the great fold systems which developed in North East Italy during the Variscan Orogeny. The surface of region involved is about 500 sq. kilometers.

In the year 2000, under the auspices of the Association of Geologists of the Friuli Venezia Giulia Region, I launched the first *Geoday*, a once-a-year field trip (of either one or two days in duration) targeted on geologists and the general public. The goal of the field trip is to illustrate the regional geology directly in the field. In 2008, a *website* was created in collaboration with G.G. Zuffa ([www.edu-geo.it](http://www.edu-geo.it)) intended for students and high school teachers; the website features explanations, pictures and logistical details for conducting day-long excursions in several key geological

areas of Italy. The various geo-trips are organized by experts, mainly from university, who are willing to guide students in the field.



Well-known objects (like trains, phonebooks, etc.) illustrating geological processes.

Recently, together with F.A. Pasquaré Mariotto, we have presented these new ways of popularising Earth science in workshops and, by illustration in publications.

I began my geological pathway more than 40 years ago. Over this time the small talents I thought I'd lose forever have become a key part of my work, without which my love for geology wouldn't have been able to transform me into an Earth science educator.

## Some thoughts

When Chris King – an innovator in Earth science education – ideated this initiative, he was thinking about it as a way to contribute to the birth of a new generation of educators.

Our community's main task is to play a key suggesting ideas and stimulating thoughts, so as to involve the new generation of educators through our past and present experiences.

In view of that, a few basic points  
Need to be pointed out:



On X Geoday, studying the karstified Devonian rocks of the Alps, 2009.

- 1) Educating is a mission: you cannot choose to become an educator, you must feel the... *education-vocation*!
- 2) Your lessons must be *like trees and not like bushes*. You should do as much as you can do to present the contents of your lessons in a plain and hierarchic way;
- 3) Every time you explain a physical process or a cause-and-effect relationship, when possible, try to coming up with examples from the everyday life; it will foster understanding and memorization;
- 4) Be aware that your continuous progress as an educator will be made possible also thanks to the educational relationship built with your students;
- 5) Today's lesson must be better than yesterday's and less effective than tomorrow's one.

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Corrado Venturini, January 2016, aged 60,  
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