

19<sup>th</sup> EP Meeting

Sofia, Bulgaria, 14<sup>th</sup> - 21<sup>th</sup> November 2010

**EP M LAYOUT**  
**2011**

Anamaria Grofu

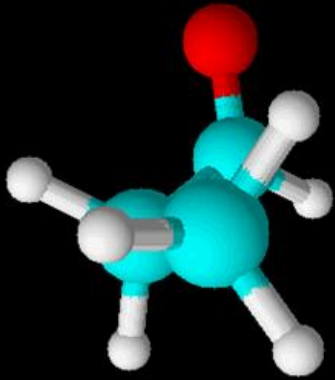
And

Mattia Masciarelli

# 1<sup>st</sup> COVER

HISTORY OF SCIENCE AND TECHNOLOGY  
TECHNOLOGY FOR GREEN ENERGY

**EUROPEAN PUPILS MAGAZINE**



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No. 25 - vol9  
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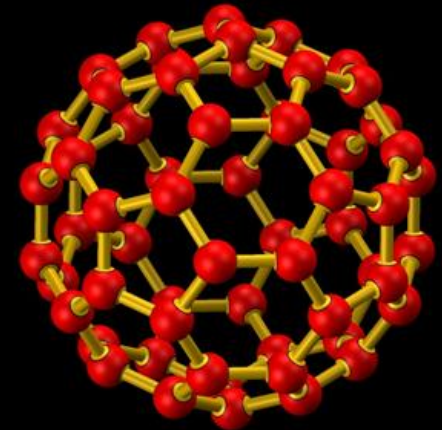
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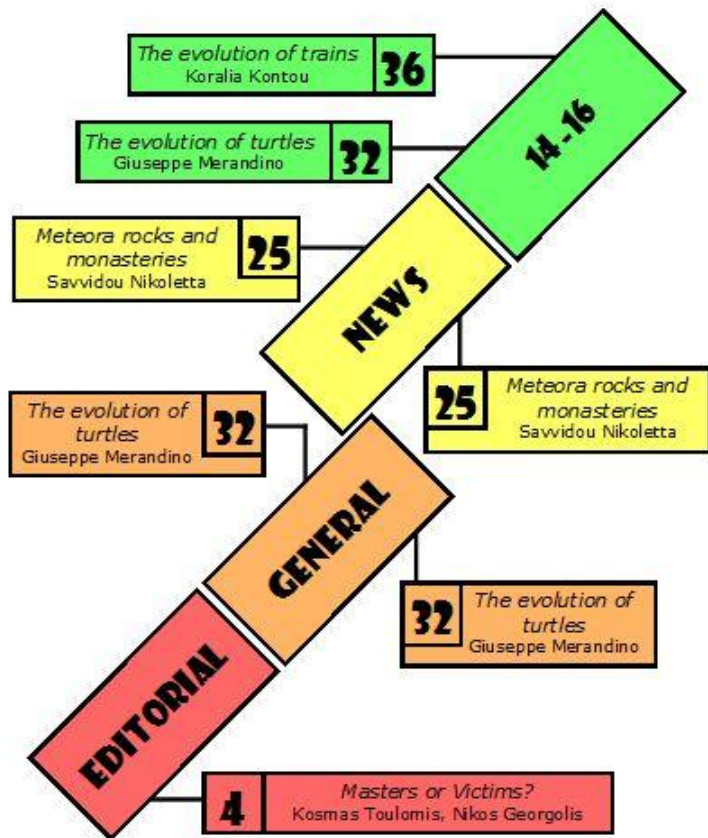


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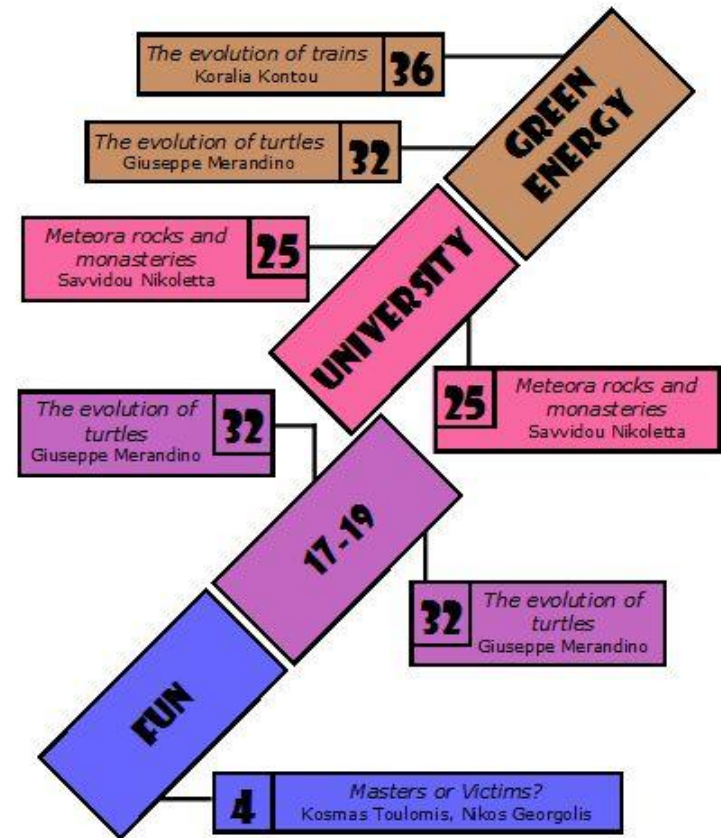
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## EUROPEAN PUPILS MAGAZINE



HISTORY OF SCIENCE AND TECHNOLOGY  
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## EUROPEAN PUPILS MAGAZINE



# EDITORIAL

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## Giuseppe Merandino

### Masters or victims?

### Κυριαρχοί η υποτελείς?

The Greek word *epistimi* (science) comes from the ancient Greek verb *epistamai*, which means *to know well*.

In a similar way the relative English word *science* is derived from the Latin *scio*, which means *know*.

Η ελληνική λέξη *πιστήμη* προέρχεται από το αρχαίο ελληνικό ρήμα *πισταμαι* που σημαίνει *γνωρίζω καλά*. Κατά παρόμοιο τρόπο η αντίστοιχη αγγλική λέξη *science* προέρχεται από το λατινικό *scio* που σημαίνει *γνωρίζω*. Φαίνεται, όμως, πως αυτή η υποδήλωση εκφράζει περισσότερο την αλαφρική αντίληψη του ανθρώπου για τη δυνατότητά του να γνωρίζει τα πάντα και με επάρκεια, παρά την πραγματικότητα. Δύο πρόσφατα γεγονότα έρχονται να μας υπενθυμίσουν ότι αυτή η παντογνωσία μας είναι απιστή και ότι η πεποίθησή μας γι' αυτήν μας οδηγεί πολλές φορές σε εγωιστικές και υπερεκμεταλλευτικές συμπεριφορές.

Η έκρηξη του ηφαιστείου της Ισλανδίας και η ρύπανση του κόλπου του Μεξικού είναι δυο γεγονότα της πρόσφατης επικαιρότητας

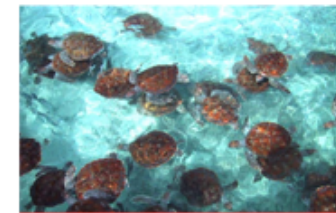


Possibly, the first samples of turtle  
*I primi possibili esemplari di tartarughe*

It is obvious that this hint signifies rather an arrogant human perception for his ability to know everything sufficiently, than the reality. Two recent events come to remind us, that our omniscience is deceitful and our confidence for it leads us several times to selfish and over-exploitative behaviors.

Two recent events, *The eruption of the volcano in Iceland* and *The oil spill in the Gulf of Mexico* are strongly connected with the above thoughts.

In April 2010, the *sleeping* volcano Eyjafjallajökull of Iceland erupted, throwing away the glacier covering it, and poured volcanic ash many kilometers in the atmosphere. In sequence, with the help of the winds the ash was transferred south covering an extended area over Europe,



A group of playing turtles  
*Un gruppo di tartarughe che giocano*

με μεγάλη σημασία. Τον Απρίλιο του 2010, το *κοιμώμενο* ηφαιστείο Eyjafjallajökull της Ισλανδίας εξερράγη, εκπύσσοντας τον παγετώνα που το σκέπαζε, απελευθερώνοντας ηφαιστειακή τέφρα αρκετά χιλιόμετρα στην ατμόσφαιρα. Στη συνέχεια η ηφαιστειακή τέφρα με τη βοήθεια

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shutting down the airspace and bringing chaos in world air traffic.

World community lived in a special kind of hostage situation, which had an impact in business world. Coincidentally, the same month in Gulf of Mexico, off Louisiana coast, a catastrophic explosion and fire occurred in an oil drilling rig, killing 11 workers, due to methane combustion.

Unfortunately, misfortune did not end here. Rig destruction led to an uncontrolled

των ανέμων μεταφέρθηκε νότια και ανατολικά

καλύπτοντας ένα μεγάλο μέρος της Θηραϊκής Ηπείρου, καθιστώντας ανενεργό τον αναερίο χώρο της και προκαλώντας έτσι χάος στις παγκόσμιες εναέριες μεταφορές. Η παγκόσμια κοινότητα έζησε για μερικές μέρες ένα καθεστώς μιας ιδιότυπης ομηρείας, η οποία μεταφράστηκε εκτός των άλλων και σε οικονομική ζημία για πολλές επιχειρήσεις. Από σύμπτωση τον ίδιο μήνα σε μία εξέδρα άντλησης πετρελαίου στον κόλπο του Μεξικό, ανοικτά της Λουιζιάνα, σημειώθηκε έκρηξη μεθανίου, που οδήγησε στο θάνατο 11 εργαζόμενους. Δυστυχώς, υπήρξε και συνέχεια. Η καταστροφή της εξέδρας οδήγησε σε μία ανεξέλεγκτη διαρροή πετρελαίου, που παρά τις προσπάθειες της εταιρείας στάθηκε αδύνατο να σταματήσει



A turtle of 65-70 years old  
*Una Tartaruga di 65-70 anni*



A sea turtle in its natural habitat  
*Una Tartaruga Marina nel suo Habitat naturale*

On the other hand, oil spill in the Gulf of Mexico shows another time that scientific knowledge is not neutral, but it depends on the responsibility of the scientist and the user, generally. As long as we believe that we control the nature and use the science in order to dominate it at any cost, actually, we disturb a primal equilibrium. Although such an ascertainment looks naive or even odd to our human-centered world, it comprises, on second thought, the quintessence which should regulate our scientific concerns. Hence, *epistamai* or *scio* (to know well), means neither asserting our authority nor being terror, but reinforcing and securing the viability of our planet and its living beings. viability of our planet and its living beings.

σε αρκετές μέρες. Αξιοματούχοι εκτίμησαν ότι 40000 έως 60000 βαρέλια χύνονταν κάθε ημέρα στον κόλπο του Μεξικό, έχοντας ως αποτέλεσμα μια οικολογική καταστροφή. Μόλις ύστερα από δύο μήνες από το ατύχημα, επιστήμονες και τεχνικοί κατάφεραν να περιορίσουν τη μαζική διαρροή πετρελαίου. Όπως παρουσιάστηκε και σε μία γειωγραφία, η τεχνολογία εξδουλεύει είναι σε ένα υψηλότερο επίπεδο, ενώ η τεχνολογία καθαρισμού (σε περίπτωση ατυχήματος) είναι ένα κομμάτι χαρτί. Αξίζει, λοιπόν, να αναστοχαστούμε στο πλαίσιο του περιοδικού μας και με αφορμή αυτά τα γεγονότα όσα διέπουν κάποιες καταστημένες, από καιρό, αντιλήψεις μας. Το ηφαιστείο απειδείξει ότι όσο περισσότερο πιστεύουμε πως η επιστημονική γνώση μας καθιστά.



# GENERAL

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## Giuseppe Merandino

### The evolution of turtles

*L'evoluzione delle tartarughe*

The first **reptiles** appeared in the **Paleozoic era**, probably in the **Carboniferous period** (345 million years ago), from a group of primitive **amphibians** that had already left the liquid element. These beings had a stumpy body with a



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strong skeleton (the skull was composed from few thick bones, without openings). They stirred the **water** with their body and their tail, partially crawling with the abdomen.

The anatomical structure that characterizes them is one of the most important examples of adaptation and the probable cause of their evolutionary success. In fact, many groups of reptiles and vertebrates disappeared from the evolutionary climax around 65 million years ago, perhaps because of a geological or climatic contortion, due to the detachment of the first terrestrial plates from the Pangea that has resulted in the current form of the continents. The elevated biological specialization of the reptiles, that

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A turtle of 65-70 years old  
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Su di un guscio e un cranio fossili recentemente trovati nel paese latino, scopri che non appartenevano ne ai **Cryptodira**, ne ai **Pleurodira**. L'esemplare trovato datato tra 160 e 140 milioni di anni fa, fu battezzato con il nome di **Condorchelys antiqua**. Questa fu un'ulteriore prova che questi primi due gruppi sarebbero più giovani di almeno 60 milioni di anni rispetto a quanto creduto fino a poco tempo fa.



A sea turtle in its natural habitat  
*Una Tartaruga Marina nel suo Habitat naturale*

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# NEWS

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# FUN

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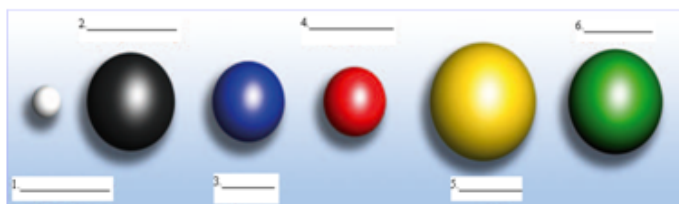
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## Giuseppe Merandino

### The evolution of turtles

Complete the names of the atoms:

- A. Chlorine
- B. Oxygen
- C. Nitrogen
- D. Hydrogen
- E. Carbon
- F. Sulfur



### SOLUTION

- 6- A. Chlorine
- 5- F. Sulfur
- 4- B. Oxygen
- 3- C. Nitrogen
- 2- E. Carbon
- 1- D. Hydrogen

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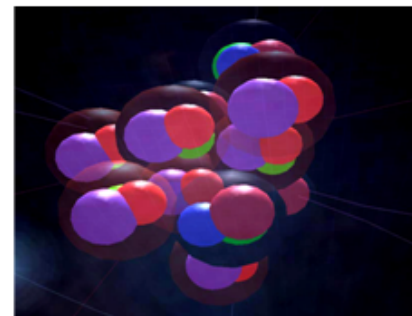
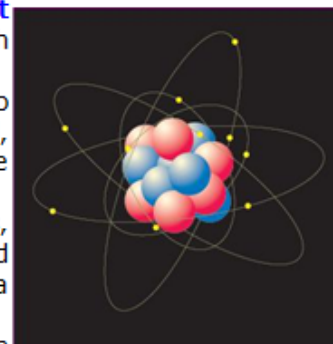
The use of **symbols** for the **chemical elements** comes from **ancient times**.

For example, **ancient Greeks** symbolized **silver** with crescent.

In **1814**, **Berzelius**, who was a **Swedish chemical**, established the **symbols** of the current **chemical elements**.

According to **Berzelius**, every **element** is represented as a capital letter or as a capital letter and a small letter.

Every **symbol** symbolizes an **atom of the elements**, too.



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## Giuseppe Merandino

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#### L'evoluzione delle tartarughe

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