- practical: "I know that chlorine kills harmful bacteria in water"
- appreciative: "we did not have these kinds of things in our generation, but we are glad for our children"

Conclusion

This last YAC couldn't have been better: many enthusiastic students, lots of general public, and wonderful weather. Teachers took their own children or proudly posed with their students for the photographer. The headmistress and the science teacher of Ntsika came to watch their students.

There is little, or no, access to computers and the internet in schools in this area, so the organizers need to find a way to connect these teachers to the rest of the world. The MiST (Mathematics, Information and Communication and Technology [ICT], Science) Research Centre at Rhodes University decided to consider the logistics for sustaining the YAC initiative. Ngcoza learned that C.M. Vellem school is involved in the Eyethu ICT initiative, through which they receive computers and internet connectivity to share with the community. It will be ideal to link the YAC South Africa project to this initiative. This school is central to the other schools involved in the workshop.

Steenberg and her colleagues at RADMASTE are looking into the possibility of inviting teachers to YAC workshops and having another YAC event in the future. There is interest in establishing a YAC in Mpumalanga and in Gauteng, which would bring YAC to three of the nine provinces in South Africa.

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- Kate Benyon for organizing and booking the YAC Event venue and securing tables to be used for the YAC event near the Cathedral
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For more information about the YAC project, contact Lida Schoen at <amschoen@xs4all.nl>.

www.iupac.org/projects/2003/2003-055-1-050.html

Principles of Chemical Nomenclature

In light of recent nomenclature developments, a project has been established to produce a new version of the original 1998 book *Principles of Chemical Nomenclature—A Guide to IUPAC Recommendations*. With most of the IUPAC color books recently revised or currently in a state of revision, this project is timely. The *Nomenclature of Inorganic Chemistry* (Red Book) was recently revised and published in 2005. A new edition of the *Nomenclature of Organic Compounds*, including preferred names, (Blue Book) is being worked on and is expected for 2008. And a revised edition of the compendium of *Macromolecular Terminology and Nomenclature* (Purple Book) is also being finalized.

The original book was aimed at pre-university and first-year university students and their teachers, and the new version will have a similar audience. However, it is intended to widen the scope a little, to include more biochemical nomenclature, more organometallic nomenclature, and some treatment of Preferred IUPAC Names (PINs) and the IUPAC International Chemical Identifier (InChI).

G.J. Leigh will be general editor; a writer and reviewer will contribute to each main section. Much of the material and the format of the original version will be retained. Chapters assignments are as follows: introductory chapters will be written by G.J. Leigh and reviewed by N.G. Connelly; inorganic chapters will be written by R. Hartshorn and reviewed by T. Damhus;

organic chapters will be written by H. Favre and reviewed by J. Nytrai; organometallic chapters will be written by A. Hutton and reviewed by E. Nordlander; macromolecular chapters will be written by M. Hess and reviewed by J. Kahovec; biochemical chapters will be written by G.P. Moss and reviewed by H.B.F. Dixon; and PINs/InChI will be written by A.D. McNaught and reviewed by S. Heller.

For more information and comments, contact the Task Group Chair G. Jeffery Leigh <jeffery.leigh@sky.com>.

www.iupac.org/projects/2006/2006-029-1-800.html

Metal-Focussed –omics: Guidelines for Terminology and Critical Evaluation of Analytical Approaches

Bioinorganic analytical chemistry is a rapidly developing discipline at the interface of trace element analysis and analytical biochemistry, which targets the detection, quantitation, identification, and characterization of complexes of metals (metalloids) with molecules of natural origin (biomolecules) by hyphenated (coupled) techniques (*PAC*, 1999, 71, 899–917). The advances of trace element analysis in life sciences resulted in the proliferation of new terms related to the description of metal-interactions with biomolecules. Examples of these terms include metallome, ionome, metalloproteome, metallogenome, metallometabolome, heteroatom-tagged proteome, single element proteomes (ex. selenoproteome), and the corresponding *–omics*. The terms are being coined by various disciplines, and the lack of communication among them results in the growing confusion. All terms are very recent and have not been considered in the *Guidelines for Terms Related to Chemical Speciation Analysis* published in *PAC* 2000, 72, 1453–1470.

In addition to the confusion in terminology, the methodological approaches are proper to each individual discipline. They have all the characteristics to be complementary, but in practice they are carried out independently, with no communication channels among the communities. The project participants intend to conduct a critical analysis of these approaches, of the information they produce, and of the validity of data obtained. The project targets the speciation analysis community organized around the European Virtual Institute of Speciation Analysis <www.speciation.net>, structural genomic consortia, clinical biochemistry, medicine and health sciences communities (characterization of metal-related diseases and related areas, heteroatom-containing species as new clinical biomarkers), nutrition and metabolic sciences (molecular targets of metal binding for essential nutrients and toxic metals), and environmental toxicology (toxic metals in life-sciences and their environmental effects). It should be of interest to regulatory bodies answering the question of what valid information can be obtained in a quantitative and routine way in the metal-related –omics areas.

For more information and comments, contact the Task Group Chair Ryszard Lobinski <Ryszard.Lobinski@univ-pau.fr>.

www.iupac.org/projects/2006/2006-037-1-500.html

Altered Crop Protection Agent Residues in Transgenic Crops

Since the first large-scale commercial introduction of transgenic crops in 1996, the area cultivated with transgenic crops has increased continually, amounting to 102 million hectares worldwide in 2006. Most of the cultivated area is concentrated in the USA, followed by countries like Argentina, Brazil, Canada, Paraguay, China, India, and South Africa, in which the predominant transgenic crops for sale include soybean, maize, cotton, oilseed rape, and potato.

The two most prevalent traits linked with these crops, which are of environmental importance, are herbicide and insect resistance. Herbicide resistance greatly improves weed management and control, allowing herbicides (weed killers) to be applied "over the top" of the crop, eliminating the need for frequent and directed herbicide sprays between crop plants or mechanical removal of weeds. Many insect-resistant transgenic crops contain insect-killing proteins obtained from the soil bacterium *Bacillus thuringiensis*, which are toxic to certain insect species, but not to humans and domestic animals.

Both herbicide and insect resistance traits are likely to affect the nature and quantities of the applied pesticides. This can take the form of increased usage due to over-the-top application of herbicides on the transgenic crop, or of substitution or omission of other pesticides, as discussed in an ongoing IUPAC project (2001-024-2-600), which also considers the possible consequences of these changes on the environment.

The current project extends upon the previous project by considering the impact of transgenic crops on the use of pesticides and the level of pesticide resi-