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Message from the President

July 18, 2005

Dear PAASE Members:

The PAASE APAMS meeting in the Philippines was a great success. There were over 200 attendees from all over the Philippines and the US. Included in this group are 54 students who were sponsored by PAASE members. Thank you members for your very generous support. The meeting was well organized with hardly a glitch. The meeting rooms were very tastefully decorated and the local organizers did an excellent job of making things run smoothly (Thank you Prof. Ramon del Fierro). We should also thank the dancers from University of San Carlos who made time for us by performing native Filipino dances. From the feedback I received from students and nonstudents, the conference was a big hit. The scientific quality was even higher this year than in Manila two years ago, where it was already of very good quality. I feel that people presented their best work and the conference really highlighted the quality of science in the Philippines. I now hope that this activity and those pre- and post-conference whether as part of PAASE or as personal initiatives will stimulate more cooperation between Philippine and US based scientist. The combination of plenary and multiple session oral presentations seemed to have worked very well. All the multiple sessions were well attended and there were always lots of questions.

We have also learned more about running this type of an event, particularly with coordinating the efforts between the US and the Philippines. An especially big Thank You goes to Dr. Giselle Concepcion whose untiring work and enthusiasm really pushed this project through. Thank you Giselle. But thanks also go to the teamwork and understanding of several people including Prof. Felix Buot (the US based organizing chair) and Dr. Sevilla Detera-Wadleigh who stepped in when it was necessary.

The next PAASE –APAMS meeting will be organized locally by the PAASE members at La Salle University. It has been scheduled for Feb. 16-18, 2007. Congratulations to Prof. Alvin Culaba who will be the PAASE President during that meeting.

Next year's meeting will be in the University of California, Davis. I will be doing the local organization, so if you have suggestions please feel free to drop me a line. We hope to include PAASE members in the West Coast who have not been able to attend the East Coast meetings.

Sincerely,

Carlito B. Lebrilla
PAASE President

PAASE CELEBRATES ITS 25TH ANNIVERSARY IN CEBU

Cebu, the oldest city in the Philippines and regarded as the "Queen City of the South", was the site of the 25th APAMS meeting. Cebu is one of the most popular tourist and business destinations in the country, "a unique blend of tropical paradise and business haven." Known for its white sandy beaches, pristine clear waters, and fantastic diving grounds, the city is also the site of the University of San Carlos, a Catholic university run by the Society of the Divine Word Congregation.

The theme of the 25th APAMS meeting was "Promotion of International Science and Technology Cooperation." In today's world, where technology has given the world's population unprecedented power to reach someone in nano seconds, this meeting highlighted researches in science education, scientific research, medicine, and technology of U.S.-based PAASE scientists and engineers and their Philippine counterparts. The attendees gained knowledge and understanding of the various issues in the Philippines and global and local issues it shared. The meeting brought together scholars from education, economics, natural resources, health, science, science and technology, and cooperative ventures and how the various studies could help us understand the current state and health of the nation as a whole.

Of the 124 oral and poster papers presented at the meeting, Philippine partnerships with other countries that were identified cooperated with eight (8) Filipino American scientists in the U.S. Four researches collaborated with Japan; 2 with Germany; one each with Singapore, Hungary, and Canada respectively. The U.S. laboratories and universities identified working closely with the Philippine counterparts are U.S. National Institutes of Health, USDA.- CSREES, Iowa State University, University of California at Davis, and Berkeley, Nutrition Center of Tufts University. Philippine scientists and investigators collaborating with local universities are the University of the Philippines Marine Science Institute, De La Salle University, Ateneo de Manila University, UST, Don Bosco Technical College, Leyte State University, and the University of San Carlos. Multi-university cooperation of research investigator were identified based on the affiliation reported by the authors. Cooperation with U.S.-based PAASE members was identified in the areas of molecular biology, oligosaccharide chemistry, lunasin efficacy, bipolar disorder and schizophrenia, vitamin A deficiency, protein molecule engineering, and conus research.

Nineteen (19) U.S.-based PAASE members made oral presentations or chaired a session. There were 124 poster presentations, 16 poster presenter from the U.S. and 95 posters with multiple authorship (102 from the Philippines; 3 each of the Philippine presenter collaboration with Japan, Australia and Korea). Many attendees made a special trip to Bohol, this thin sliver of land blessed year-round with clement, tropical weather – all the better to enjoy its pristine, sun-drenched beaches, washed by the balmy blue waters of the Cebu and Tanon Straits. A special trip to the Bernedo farms, the Institute of Physics, and

several ancestral home were included in this trip as well. Please visit paase.org for detailed information of the events and activities.

BIODIVERSITY, CONSERVATION, COOPERATION IN THE PHILIPPINES

Population growth has been the key index to biodiversity loss. According to Conservation International, an environmental organization based in Washington, D.C., forty percent of all threatened species live in the Philippines, Australia, New Zealand, China, Europe, South America, and Africa. These countries are considered biodiversity hotspots. In the Philippines, 67 per cent of the animal species are endemic or native to the region of Cebu. It is difficult to provide conservation measures to protect and preserve threatened species, which at the same time are being utilized for food, agriculture, industry, economics, and for various other reasons. At the same time, these same species continue to be subjected to pollution, environmental degradation, and man's continuous quest for a place to live which ultimately leads to destruction of the environment. Additionally, activities such as logging, commercialization of ornamental plant species, slash-burned agriculture, all contribute to the dwindling of plant and animal species which due to lack of conservation measures, would also result in the dwindling of still unidentified plant and yet to be discovered animal/plant species. This meeting showcased the status of biodiversity, conservation measures, and cooperation in teaching and research. Participants through oral and presented papers show what is the state of this ecoregion.

The Philippines being situated in one of the centers of marine biodiversity has been considered the hottest of the hotspots (Alino: Tutorial-125). Alino further said that it would take 100 years to reach 10% full protection. Utilization of bioeconomic models and ecosystem based approach together with education are few of the ways that would maintain and sustain the country's marine flora and fauna. For sustainable development, L. Cruz (Poster: 120) pointed out the incorporation of conservation into the curriculum a course that would help develop awareness and concern for biodiversity and conservation in rural communities. Through pilot runs of the course, the students obtained feedback from the community, while the community obtained the knowledge and skills from the hands on experience they obtained from participating students.

Philippine soils are rich in minerals and continue to sustain to this day the country's rich natural flora and fauna. Man's application of agricultural practices has resulted in the rise of invasive species which become uncontrollable, and can only be eliminated with the use of pesticides and herbicides. Thus a chemical warfare has been going on from rice growing regions to corn harvesting and tobacco, and abaca agricultures of lands as well, as well as warfare in the seas (formaldehyde is used to harness tropical fishes). The loss of our native species is evidently cruel, and is worsened by hunger, malnutrition, and political corruption, all contributing to one very unsustainable Earth.

There are ongoing research partnerships in which local medical and science universities are working together to save the Tullahan River, a 27-km waterway and to ensure it for sustainable development. The river water from all sites was found to be highly mutagenic, but at the same time revealed the presence and sufficient number of zoo and phyto-planktons (Daguplo, et. al. 70-71).

Where agricultural sector is recognized as the primary steward of the nation's natural resources (Espiritu, R., et. al. :71), the greatest leverage for change and improvement in rice, *Oriza sativa spp.* is the establishment of an Environmental Management System (EMS). The Philippines is known for having a rich variety of rice species which are being researched on at the International Rice Research Institute. The poster paper of Espiritu, R., et. al. (Integration of EM in the RD Management of Philippine Rice (P1-11:71) briefly presented how EM and PhilRice is committed to sound environmental policies toward sustainable development in agriculture.

To develop economically viable rice hybrids a cytoplasmic-genetic male sterility (CMS) line must be tapped (Pacada:72) to produce and identify heterotic F1 combinations, a hybrid which is vulnerable to pests and diseases. Pacada and others are using micro-satellite markers to determine the genetic relationship among lines used in hybrid rice breeding in the Philippines.

Majority of the papers presented utilized the latest in molecular methodologies. Phylogenetic analysis using molecular bioassay can prove and revise the taxonomic classification of the family Rutaceae, subfamily Aurantioideae (citrus family) (Panes, et. al.: 73).

At this meeting, some of these plants and animals indigenous to the Philippines and nowhere else in the world were discussed as rich sources of chemicals to combat cancer. The Forests of Mt. Makiling and Mt. Banahaw were mentioned as research stations of the different colleges and universities. The use of neutraceuticals from the different parts of plant species was explored.

There was an overwhelming number of papers on biotechnology and natural products. Excellent presentations in the area of natural products revealed that the Philippines remains to be a very rich source of anti-cancer compounds as well as new pharmacological agents that could be tapped as sources for new therapeutic compounds. In this conference, researches using germplasm studies using natural products from animals and plants clearly demonstrate the latest important discoveries in pharmacology, chemistry, and medicine of some of the important substances which have important pharmacological, medicinal, nutritional, and many more nutraceutical values. I have arranged and listed the species studied by the various investigators as presented in their respective abstracts of their curative/medicinal values, including the scientific and common names, which were lacking in some of the submitted papers. To name a few are: *Tiesa* - extracted from *Pouteria campechiana* which is believed to be an anti-mitotic compound. Known as eggfruit or sapote astringent bark is taken as a febrifuge in Mexico and applied on skin eruptions.

A preparation of the seeds has been employed as a remedy for ulcer. C. Hernandez (PAR2F-1:60) successfully isolated a stilbenoid from the leaves extract. Apparently, the compound was "found in the primary screen affecting cell cycle progression of synchronized HeLa cells and determined to be a microtubule effector in the secondary screen."

Forty percent of the sponge cellular volume contains an enormous amount of microorganisms. The marine sponge *Halisarca* contains chemicals that can be used against gram + and cocci organisms belonging to *Streptococcus pyogenes* and *S. aureus* (I. J. Jao, et.al P3-6: 86). Sponges have adopted toxins as a main line of defense against grazing fishes and immobile invertebrates. The production of these toxic chemicals (Genthe, H. 1998. Smithsonian Magazine, 52) act as an "invisible shield to keep predators (or marine biology students) at bay." and rich source of biomedical agents. I.Uy with B. Olivera, V. Monje, and G. Concepcion (see P2-9:82 and P2-10:83)

Natural products can be synthesized from turrids and sponge species (Geronimo, R. , et. al. (P2-3:79). (Go, et. al. PAR2F-2:61 and Elardo, et. al PAR2F-3:61). Marine sponges (*Dysidea sp.*) collected in Cagayan de Oro showed significant tumor cytotoxicity (Mangalindan, G. et. al. (P2-7:81) and in R. Geronimo et. al.P204:79).

Turrids - contain neuroactive pepto constituents. Cytotoxic brominated diphenyl-ether were extracted from sponges. Toxins were extracted from *Conus batheon* spp.(I.D.Uy, et. al.P2-1083). Sponge-associated microorganisms in sponges provide the promise of new pharmacological agents (See S. Elardo et. al. PAR2F-3:61). The authors discussed bioactive metabolites that are antitumor and antitoxic properties. We have here researchers that are made possible on simple bioassay procedures on a shoestring budget and first class revolutionary discoveries from species harnessed from the ocean that need to be restored back to its pristine condition and overly exploited and damaged resources.

Chalcone from *Syzygrum samarangense* (macopa)- has prolyl endopeptidase inhibitory and spasmolytic activity (E. C. Amor et. al. P3-1:83)

Hesperidin methyl chalcone - an ingredient found in the citrus family

Plants from family Brassicaceae tend to absorb heavy metals from the soil and are used for soil bioremediation.

Achuete's (Bixa Orellana) - extract from fresh leaves has diuretic power (J. Rabe, M. Tan, and D. Roma P3-9:88)

Actinomycetes in soils - have anti tumor and antibiotic properties

Aloe vera (sabila) - anti-inflammatory activity of the amino acid, including steroids and lipids (J. Dalman et. al. P3-3:84)

Annona squamosa (atis), *Sarcandra*, and *Hibiscus* - have chemo-preventive properties

Annona muricata (guyabano) *Muntingia calabura* (aratiles) - mutagenic and antimutagenic properties (A. Lopez, et. al. P3-7:87).

Annona squamosa (atis) and *Hibiscus rosa sinensis* (gumamela) cancer chemo preventive properties (Dator et. al. P3-4:85)

Cassia alatum - and its medicinal value (See V. Tolentino et. al. P1-22:77).

Coconut - glucoamylase also extracted from *Aspergillus*

Coriander sativum (cilantro, chamomile spp.)

Chines or garlic chives or nira, *Lactuca rosa*

Cucurbita maxima (squash) antipyretic activity in the mesocarp of this species and other species , specifically because of its flavonoid contents (Tecson P9-12:90)

Dila-dila and its diuretic activity on albino rats

Elephantus scaber (dila-dila) - diuretic activity of *Sesquiterpenes sp.* on albino male rats (A. Flores et. al. and R. Dator et. al P3-5:56).

Plant species belonging to the Euphorbiaceae have its anti-oxidant properties. Euphorbiaceae (includes croton, castor, poinsettia, and rubber plants) - Anti-oxidant properties of crude ethanol extract - hypoglycemic pump

Ganoderma applananthus (a bracket fungi) reported here as a first study on angiotensin

Guyabano and aratilis' mutagenic and anti-mutagenic activities on mice (F. Teves et. al. P3-15:9)

Luffa acutangulla (patola) can induce hyperglycemia in albino mice (E. Quero, R, Sy, and V. Sumalinog P3-8:88)

Patolas' (*Trichosanthes lobata*) induced hypoglycemic activity against alloxan-induced hyperglycemic mice

Phyllanthus niruri - crude extract from this plant species (family Euphorbiaceae) shows effect on hypoglycemia A. Aquino, et. Al. P4-1:93). The anti tumor diadoxy *Fcy* demonstrate that it has potential for therapeutic and diagnostic purposes against human carcinomas from *Pichia pastoris*

Pichia pastoris - a yeast for anti-tumor antibody, human carcinomas *(see M. K.Canlas et. Al P4-2:94).

Plant samples -cytotoxin isolate and its importance on breast cancer line cells

Plant extracts - methanol, a substances that can be used against asthma using guinea pig models

Pomelo (*Citrus grandis*) - dried leaves have anti-inflammatory efficacy (Tanangsy et. al. P3-11:89)

Pouteria campechiana - stelbenoid - from the leaves are good source for screening cell cycle progress of HeLa cells

Unidentified citrus species belonging to the family Rutaceae - cytotoxic isolate (L. Salvador et. al. P9-10:89)

An actinomycete, *Saccharopolyspora* shows antibacterial activity. — would be an answer to the alarming problem of antibiotic resistance and emergence of new diseases. It is hopefully believe that these substances will provide a supply of new therapeutic compounds for its Anti-tumor and antibiotic properties. Additionally, soil actinomycetes in this study also show anti tumor and antibiotics form (See F. Teves et. al P3-13:90)

Saccharopolyspora - an actinomycete with powerful antibacterial activity - *Aspergillus* and glucoamylase

Basidiomycetes - disease causing decay of Philippine Dipterocarps (Tadiosa, E, and E. Militante, PAR1H-2:45).

Soy and barley species contain a cancer preventive peptide named *lunasin* by de Lumen and other research investigators from U of Berkeley (PLE1A-2:30)..

Strawberry fruits and leaves of coriander, red coral, lettuce and chives - anti-skin tumor neutraceuticals

Squash - anti-pyretic activity, and its flavonoid concentration

Other plant species with proven anti-inflammatory activity can be obtained from the following species:

Albizia - Family Leguminosaea (Mimosa or the sensitive plant) (See M. Alumpang and M. Ysrael P3-2:84)

Chisoscheton - Family Meliaceae (Sandoricum sp. [santol species])(See M. Alumpang and M. Ysrael P3-2:84)

Drypetes - Family Diterocarpa

Evodia - Family Rutaceae (See M. Alumpang and M. Ysrael P3-2:84)

Freycinetia (pandan) (See M. Alumpang and M. Ysrael P3-2:84)

Ixorathus (Santan) in *I petiolaris* ((See M. Alumpang and M. Ysrael P3-2:84)

Kibara - Family Monomeaceae in K. Coriacea (See M. Alumpang and M. Ysrael P3-2:84)

At this meeting, two papers focused on conservation and ethics in natural products resources. These two papers present important issues that confront educators, scientists, political leaders, NGO on a daily basis: exploitation, exploration, and researches of the nation's natural resources - proper Ethical Boards to ensure safety use of herbal drugs (from manufacturing to marketing)[See Fernando, E. PS2D:58. It was suggested that the Philippines volunteer itself to the major multinational drug companies so as to provide for them the services of testing these drugs for the world market (Ibid.), and Cruz, L. P9-4:120) study that delve on the need for a holistic approach to save the environment. Cruz' paper on conservation may be the only paper that gives an alarming call to the dwindling resources from dipterocarp trees to the biodiverse species of phyto and zooplanktons in the coral reefs. Geronimo, R. , et. al. (P2-3:79) admitted that "lagging behind the researches in marine natural products, bioprospecting are the ecological functions of these extricated compounds, - an important but much less openly advocated cause of biodiversity conservation." The authors highlighted how these studies could link scientific inquiry, conservation management, including societal uses of products derived from turrids and sponges.

The case studies on children suffering from Vitamin A deficiency in rural Philippine communities (See Ribaya-Mercado, J. and Solon, F. PAR2B-1:53), argued that plants species rich in vitamin A and plant species that can prevent anemia and malnutrition among Filipino children are significantly diminishing in the environment. To improve iron status of anemic school children in Compostela, Cebu, for example, a study to fortify *pandesal* with 3 types of iron fortification, and intervention methods successfully improved the iron status of the children (Solon-F., et. al. PAR2B-3:54).

There were very few papers at this meeting that examined relationships between organisms and their environment (organismic biology), indicative of little interest in basic ecological principles, which is unfortunate because such principles are very important in understanding species diversity loss.

Some of the substances that were obtained naturally in plants that are presently utilized in the removal of heavy metals in soils are present in the following families of plants : Brassicaceae and Chlorophyceae (Chlorella).

Neutraceutical substances can be obtained from strawberry fruit and leaves of Coriander, red coral, lettuce, and chives. They are proven effective on mouse tumor cells (I. Villasnor et. al. P3-17:93)

Soils - CO₂ stored in the soils by glomalin - discovered as a glue like compound that is excreted by. mycorrhizal fungi throughout the root zone. It binds soil particles and is used to assess soil quality and management impacts on soil.

Marine invertebrates:

Blomia tropicalis - dust mite which is a major source of (Bt) allergen (Ramos, J., C. Nge and C. YanPAR1A- 3:34)

Jellyfish *Aequorea victoria*

Gemmula - neuroactive peptide constituents that targets on the central nervous system, sensory and autonomic nervous system (D. Tianero et. al. P3-15:91)

Victoria C. Guerrero-Abellera, Editor

Glossary of Terms

Doreen G. Fernandez. 2000. *Palayok: Philippine Food Time, On Site, in the Pot.*
Manila: Bookmark Inc.

atswete	Bixa orellana, annatto seed; also called lipstick plant
ampalaya	Momordica charantia, bittermelon or bitter gourd
anonas	Annona reticulata, custard apple, bullock heart
aratiles	Muntingia calabura, a little cherry-like wild fruit
atis	Annona squamosa, sugar apple
balimbing	Averrhoa carambola, star fruit, carambola
bayabas	Psidium guajava, guava
camachille	Pithecellobium dulce, kamachille, Madras thorn fruit
camote	Ipomoea batatas, sweet potato
chico	Manilkara zapote, a brown sweet fruit with black seeds
bawang	Allium sativum, the leaves of the garlic plant
dayap	Citrus aurantifolia, lime
dilao, dilaw	Curcuma domestica, turmeric
duhat	Syzygium kumini, Java plum
durian	Durio zibethinus, a fruit with a strong smell
gabi	Colocasia esculenta, taro root
guyabano	Annona muricata, soursop
kadyos	Cadjanus cadjan, pigeon pea
kaimito	Caimito chrusophillum caimito, star apple
kalamansi	Citrus madurensis, a small lime indigenous to the Philippines; also called Chinese orange, Panama orange
kangkong	Ipomoea aquatica, swamp cabbage, also called potato vine
kasuy	Anacardium occidentale, cashew
katuray	Sesbania grandiflora, a white flower used in salads
kinchay	Apium graveolens, Chinese celery
kolis	Pisonia alba, lettuce tree, also called maluko in Tagalog
kulitis	Amaranthus viridis, slender amaranth
kundol	Benicasa hispida, wax gourd
kutsay	Allium odorum, Chinese chives
Llagundi	Vitex negundo, a medicinal plant
lanzones	Lansium domesticum, a small fruit that grows in bunches, with translucent flesh in segments enclosing seeds
marang	Artocarpus odoratissima, a large aromatic fruit containing segments each enclosing a seed
munggo	Phaseolus aureus, green mung bean
mustasa	Brassica juncea v. integrifolia, mustard greens
pako	Arthyrium esculentum, edible fern
pandan	Pandanus odoratissimus, screw pine
pansit-pansitan	Peperomia pellucida, a succulent herb, the leaves of which have medicinal properties
patola	Luffa cylindrica, sponge gourd
petsay	Brassica chinesis, pakchoy, bokchoy
pili	Canarium ovatum, a hard nut indigenous to the Philippines, with an oil-rich kernel
saluyot	Corchorus olitorius, Jew's mallow

santol	Sandoricum koetjape, a fruit with a thick rind and pulp enclosing whitish, furry seeds, sour-sweet in taste
sayote	Sechium edule, chayote, mirliton pear
sili	Capsicum annum, chili
singkamas	Pachyrrhizus erosus, yambean
tabon-tabon	Hydrophytune orbiculatum, a fruit, the juice of which is used in kinilaw, and for finishing baskets
tanglad	Cymbopogon citratus, lemon grass
toge, togue	mung bean sprouts
upo	Lagenaria leucantha, bottle gourd

Science Education

Science education in the Philippines lags behind when compared to its ASEAN neighbors. The state of Iowa, U.S.A. is also aware that science education is a problem in this state like any other state in the south (See Lassila and Rule (PLE1B-1:31). The authors discussed the problems in science education in Iowa and the related problems in transition of students from secondary to tertiary education levels. This problem can be solved by promoting the use of logic and critical reasoning by offering courses in physics and math early in the curricular program. The authors used analogies between the U.S. and the Philippine education systems.

The model advocated by Nobel laureate Lederman promotes revamping of the present curriculum and the use of logic and reasoning through teaching physics and math. Bernido who is an education administrator and theoretical physicist from a small privately run research center in the island of Bohol is cited as an initiative with modest but real contributions (PLE1B-3:32). According to Bernido, the creation of a pool of Science and Technology professionals essential for the country to be competitive in the 21st century is hindered by: language problem; lacks of research centers; lack of qualified PhDs , and the brain drain phenomenon. His paper demonstrates how his private research center can break these barriers. _Apropos to Bernido's discussion of these barriers, Carpio-Bernido (PLE1B-2: 31) explains how the weakness of science education in the Philippines has been perpetuated due to the lack of substantial pool of scientific manpower active in research, and science education for both science and non-science majors. The problem starts at the secondary and tertiary levels. She proposed a target-oriented CVIF Dynamic Learning Program that caters to large classes, with minimal textbooks and science equipment, and a lack of good teachers. This Program she explained is designed for poor school conditions, but can also be used for affluent schools and colleges. However remarkable these so-called measures are, were not clearly understood in this abstract just as what the acronym CVIF stands for. However, it shows promise, since it will definitely improve the existing deplorable condition of science education in the Philippines.

Fortunately, despite the dismal state of science education in the Philippines as discussed by the Bernido team, the year 2005 has been designated as the international Year of Physics to commemorate the 100th anniversary of Albert Einstein's papers on quantum theory, Brownian motion, and special relativity, etc. (See Soriano and Mistades PAR 2D-2:57.) Unfortunately, these authors failed to show in their abstract how to improve the current state of physics education in the country.

We have to look at science education from its global perspectives. Physics as a discipline was used to show the weakness of science education in the Philippines in the previous studies. Mistades (P9-1:118) looked at beliefs about Physics and Physics teaching held by faculty members of De La Salle University, and determined how much of these beliefs find their way into actual classroom practice. Using the Maryland Physics Expectations Survey [MPEX] teacher's predispositions and teachers journals, together with students feedback regarding strategies help them understand Physics as a science. Ulep and Bernardo (P9-3:119) utilized the results on working memory and M-demands of the problems among first year engineering students in General Chemistry II are statistically significant, being a better performance among students with higher working memory than those with lower working memory. The authors examined and compared the trend from students who were recent high school graduates from unidentified northern provinces and cities.

Looking back at L. Cruz (P9-4:120) paper on understanding biodiversity as a critical problem in the Philippines utilizing Edward Wilson's Diversity of Life (Ethnobiology) and Jared Diamond's 2005 Collapse in understanding that practical education is conservation science.

These four papers presented different viewpoints on the status of science education in the Philippines as well as the method which will help us understand alternative ways to study the state of science education in the Philippines. There is definitely a need for a comprehensive strategic way to raise the standards of science education in the country. Because, when you look at the seeming revolution of drugs discovered from plants and animal products in the various higher institutions of learning in the country, high caliber and comparable to discoveries of same in their Asian counterpart as well as the world, the level of understanding of these college students based alone from the presented poster and oral papers, show that they have solid high school science. The common denominator missing is the financial support from the government and not from poor teachers, perhaps teachers with less training. Each individual starting from kindergarten is encouraged to compete, learn, and strive for excellence to become the best he/she can be. However, for as long as the infrastructure is declining if not deteriorating, the educational standards will continue to decline. Studying the cause and effect relationships show that when the living standards is a little bit elevated, the quality of life improves, and basic nutrients (vitamins and minerals) are enforced by the health sector. Understanding and attaining a comprehensive overall quality of life is the primary requisite of a sound education.

PAASE's 25th APAMS meeting was more than just a meeting. It became the center of dialogues between Filipinos living in a very affluent country where the same problems is evident. The meeting of the minds, the sharing of information, and cooperation in technology, research, and community outreach in various disciplines - basic desires of citizens of the Earth.

Victoria C. Guerrero-Abellera, Editor

TO BE CONTINUED

A Review of APAMS: Highlights of the 25th PAASE Meeting will be continued in the next issue.

For those who attended this very important annual meeting, and that you are interested in contributing on the following presentations, please feel free to write a summary on any of the following topics covered at the meeting.

Bio-physical-chemical and natural products research

Promotion of international science and technology cooperation

The role of science and technology development in Philippine economic growth

Energy, health, instrumentation and investments

Promotion of science and technology cooperation - possible solutions

Nineteen Oral presentation

Bipolar disorder and schizophrenia

Cancer preventive peptide lunasin

Science education problems in Iowa

21st century education for Filipinos

Recognition of research centers as catalysts

Genetics, biomedical science and molecular biology

Environment and natural resources

MINUTES OF THE PAASE BOARD MEETING, June 26, 2005, Waterfront Hotel, Cebu City

1. The meeting was opened with a vote on the venue for the 2006 APAMS. Dr. Carlito Lebrilla volunteered to organize the meeting in UC Davis. The venue was approved. It was suggested that Filipino PhDs based in California should be invited to the UC Davis meeting.

2. Dr. Joe Cruz made a motion, later withdrawn, to request all authors to make their Powerpoint presentations electronically available on the APAMS website. It was argued that this would require too much

work for the webmaster (Felix) as well as use up too much memory. An alternative would be for anyone who wants to obtain a copy of the presentations to email the authors themselves.

3. Assessment of the 2005 APAMS:

- The panel discussions were informative but whether they will bear any fruits remains to be seen.

Additionally, the students were overlooked in the panel discussions. There were no student representatives in any of the panels.

- Copies of the speeches should be made available.

- Plenary sessions will be posted by Felix on the website.

- There was very little down time during the meeting and hardly any time to network with the other participants.

- Too little time was allotted for the poster presentations. There should have been a 2-3 minute allotment for each poster presenter, which was done quite successfully at the Manila Hotel meeting in 2003. It was suggested that one slide presentation of the poster might have generated some interest to view the posters in detail.

- Comments on the Parallel Sessions – the time limit was not followed in many of the sessions. Thus, the timing was not synchronized so that it was difficult to move from one session to another and still hear the full presentation. It was suggested that the presentations be made more general and less specialized so that those who are not in the field will be able to understand. This is true for the Plenary Sessions, but less so for the Parallel Sessions. It was suggested that guidelines be given to the authors upon acceptance of the abstract.

- Comments on the Plenary Sessions – the Plenary Sessions should be more interpretative and should not concentrate on too much data. The screen was too far for some in the audience. The slides should be legible.

4. Dr. Alvin Culaba was voted as Vice-President/President-Elect for 2006. This will streamline the preparations for the 2007 APAMS to be held at De La Salle University in Manila. The Secretary for 2006 will be Dr. Felicitas Lacbawan (pending her consent). Dr. Jean Tiong-Khoeler will remain as Treasurer.

5. A general election for the Board of Directors will be held before the end of the year. The Nominees for three new BOD positions are:

Toby Dayrit

Asuncion Raymundo

Judy Ribaya-Mercado

Raymond Tan

Leah Tolosa

Liza Virata

6. The dates for the 2007 APAMS to be held in Manila will be February 16 – 18, 2007.

7. Due to the many questions and apparent violations of the PAASE Constitution in the recent past, a Constitutional Committee was formed with Ed Padlan as Chair and Seville Detera-Wadleigh and Pedro Jose as members. PAASE members are encouraged to email suggestions to the committee.

8. The President, Carlito, will solicit suggestions on pressing issues, such as the procedure for election of the president and his qualifications. At present, the president (or president-elect) can only be elected from the Board of Directors. This limits the choice to only three people due to constraints of tenure. The membership fee is also a pressing issue. It was suggested that US members pay a \$ 50.00 membership fee while Philippine members pay P 500.00.

9. The new Membership Committee will be comprised of Joey Comiso, Carlito Lebrilla and Toby Dayrit. This Committee will also decide on membership policy. For example – How big should PAASE be? What is the member profile?

10. It was suggested that an exploratory letter be sent to DOST (specifically Dr. Alabastro) for travel grants for Philippine participants.

Respectfully Submitted:

Leah Tolosa, Secretary

REPORTS FROM OFFICERS, COMMITTEES, AND MEMBERS

1. Severino and Paz Koh Lectureship Award Committee –

The Lectureship Award winners of the last 3 years Joey Comiso, Oscar Ibarra, Mariano Estoque and Eusebio Koh.were appointed to this committee. Each year the most recent winner/s will replace the most senior, so that at any year there are 3 – 6 committee members. This proposal was unanimously approved by the BOD with immediate implementation.

The BOD reaffirmed that any member can nominate another member for the award. A CV of the nominee and a letter of nomination should be submitted to the Award Committee. (Source:Minutes of the December 11, 2004 BOD meeting)

PAASE Lectureship committee consisting of previous awardees (Jose B. Cruz, Oscar Ibarra, Mariano Estoque, Seb Koh.

For those who are not familiar with the award, it was started by our late founder, Dr. Severino Koh in 2000 and was meant to recognize PAASE's "Best and Brightest" and at the same time give them the chance to talk about the highlights of their research. The award includes a certificate of recognition and \$1000. Dr. Koh provided the seed money for this award which was originally called "Founder's Lecturer Award." When Dr. Koh died unexpectedly last year, the Board of Director of PAASE decided to rename it and make it "Severino and Paz Koh Lectureship Award."

2. PAASE Philippine Chapter –

The PAASE Philippine Chapter was suggested by Mariano Estoque by email. The success of creating one depends on the enthusiasm of the Philippine based PAASE members to organize themselves. Formalization of the chapter, such as induction of officers, will be up to the Philippine members.

3. New members –

The most recent members are Angel de Dios, Jay Revilleza, Manny Datilles, Thelma Tupasi, and Carmelita Tuazon. The The first two are Phds in chemistry and Biochemistry, while the last three are physicians specialists in ophthalmology, and infectious diseases respectively. There is no action on Noreen Gonzales' promotion from Associate member to Full member.

4. On 5/14/2005 the election to full membership in PAASE of the following:

For Full MembershipAnterola Aldwin M.Samuel D. Bernal MD, PhD, JD, MBADadios Elmer P.Guevara Amelia P.Oreta Andres W.C.Pascasio Arlene A.Pernia Ernesto M.Raposa Blesilda P.Roces Susan A.

Florentino Solon, MD, MPH,Tan Raymond R.

For Associate MembersipAlmendrala Michelle C.Sta Iglesia Drina D.

OBITUARY

Severino L. Koh, Ph.D. - Friday, April 8, 2005 marks the First year anniversary of Bino Koh's death. In the Philippine tradition, a "babang luksa" which translated is "the end of mourning" was celebrated in the home of his widow, Pacing Koh. There was a short evening service followed with light refreshments.

It was 25 years ago, when PAASE organization was founded and incorporated in the state of Indiana with Bino Koh, Pat Mangonon, Edgar Buyco from Purdue University System and Charkes Mlendres from the Argonne Laboratory were the first opiginal directors, and Bino as the first founding president (Reflections on the Philippine Academy of Science and Engineering by Severino Koh, Sulo Newsletter 3(1)2, 1996.

Mimi Sen, Ph.D. - Shared by Linda Saddam Gunanokorn of Hercules, CA.

Celebration of Mimi's Life began with a Mass at the St. James Church in Davis. Two beautiful songs (Hindi kita malilimutan, and Ave Maria) were sung by two tenors, one of them from the Sacramento opera. Monina and Anita talked about their mom's loving and caring attitude towards everybody which was highlighted by the director of the International House for her dedicated service to the diverse community of Davis. In fact, her volunteer work brought her honor from the City for outstanding contributions to an organization. Memorial remarks also came from Mimi's sister Elinore and brother Larry as well as the priest who had known Mimi as an active parishioner. No women wore black. They wore generally pastel colored attire as this was Mimi's style. During the entire ceremony, the crowd held back their tears, suppressing their emotions to project the image that everything was under control. But, these emotions were ready to split open; so that when the church door opened for everyone to walk across the courtyard for the reception, there was a thundering sound of drums which was played out so timely and dramatically; releasing the cumulative pent up feelings.

The loud and unexpected burst of sound by Taiko drummers acted like an antidote to the solemn atmosphere which was behind in the chapel's air. The drum presentation was performed by the San Francisco Taiko drummers of which Monina is a member.

Marissa (UP food-tech graduate) organized the reception with great Filipino dishes including lechon that were familiar to all ethnic background. This also reminded everyone of the many large receptions Mimi has organized. The celebration ended with Arun's acknowledgements, reminding us to show our love to our respective spouses and children, and our friends, every minute of the day, as we don't know when they will leave us. Approximately 600 people attending the celebration.

From: Cruz, Nancy [<mailto:CruzNancyLindaf@uams.edu>], Friday, May 20, 2005 6:23 P

Raymundo Punongbayan, Ph.D.(1941-2005) by Victoria C. Guerrero - Abellera, Editor
Like many others, I was saddened by the untimely death of Raymundo Punongbayan. He and four other scientists from the Philippine Institute of Volcanology and Seismology were killed in a helicopter plane crash on their way to Aurora province, Quezon to examine the possible cause of landslides in that area and to suggest means to prevent their re-occurrence once the heavy rainy season sets in. PAASE had the opportunity to have him as a speaker at its Second International meeting held in collaboration with NAST in 1998 in U.P. Diliman. At our meeting last winter, we discussed the possible speakers at our 25th PAASE meeting. One of the names suggested was Dr. Raymundo Punongbayan, a retired volcanologist, a PhD in geology, and 1960 graduate in geology from the University of the Philippines. He was an instructor in geology in the Department of geography and geology, when I took my course in geology and geography. Ray, as he wanted to be called, retired from government service as director of the Philippine Volcanology and Seismology, the equivalent of the U.S. Geological Survey. He worked as the Philippines disasters and hazardous authority, leader, and field geologist. He was instrumental in showing to the Philippines and to the world that human beings and nature can co-exist harmoniously, if proper warning systems and continuous monitoring efforts are enforced. The Philippines as we are all aware, receives Nature's anger in fury in seemingly greater proportions. Ray worked incessantly in providing mitigation and prior warning systems which provided early evacuation of the citizens thus preventing deaths of Filipinos in disastrous regions hit by volcanic and tectonic earthquakes, landslides, mud slides, and volcanic eruptions.

Ray worked from 1961 until his death, a span of almost thirty-four years. He worked incessantly especially in the 1991 Mount Pinatubo volcano eruption. It is during this disaster that the Philippines was again put in the world's map. The death toll was low because of the efforts provided by

Punongbayan and his associates on disaster mitigation and warning system. This eruption provided a better understanding of volcanoes including the after-effect of magma, lava, and, most importantly, lahars, impact to the landforms, as well as to the climatic changes. Ray, even after his retirement continued to work with the Philippine National Red Cross. His last flight to Gabaldon, Nueva Ecija showed his love for his country and people. It took many days to identify from the many very charred bodies the remains of Dr. Punongbayan. Ray is now with the Almighty. His work will not only be remembered, but will serve as a blue print for geologists to continue this unfinished legacy for the Filipino people of the Philippines and the world. His wish was very humble: no elegant and noisy necrological services and for his ashes to be scattered over Taal Lake. But it will be difficult to banish his name from memory. His record is surely a touch act to follow] He was not a political leader and a politician, nonetheless, he was a leader of the community - true to his name, punong bayan because of his priceless service to the country during numerous disasters and catastrophes where his expertise as a volcanologist and geologist was direly needed. Ang kanyang pagkawala ay isang malaking kakulangan lalo na ngat, wala pang sampu ang truly trained volcanologist sa Pilipinas. The PHIVOLCS was his dream project. If he did not dare insist on the government and its leaders that such an institution be established, we would not have such a scientific body to help the people in times of earthquakes, volcanic eruptions, tsunamis and avalanches. God Bless You, professor Ray Punongbayan. Thank you for sharing your knowledge and concerns with the Filipinos and the peoples of planet Earth. You will be sorely missed.

PEDRO JOSE, M.D. AWARDED THE 2005 SEVERINO AND PAZ KOH LECTURESHIP AWARD

Prof. Pedro Jose of Georgetown University is this year's "Severino and Paz Koh Lectureship" , PAASE's most prestigious award. He presented his lecture "Angiotensin and Dopamine Receptor Interaction in Hypertension" at the 25th APAMS meeting in Cebu.

His nominator, Prof. Onofre de Jesus of the University of Wisconsin Medical School, said it succinctly in the following words:

"Dr. Jose received his M.D. degree from the University of Santo Tomas in 1965, magna cum laude, and topped the Philippine medical board examination the same year. He is currently a tenured full professor at Georgetown University, a position he has held since 1983. He has published 136 original articles in reputable journals, another 13 are in various stages of review, 40 book chapters, 42 review articles and has lectured at many scientific venues since 1974. He has received over \$10M of research funding including an NIH grant which has received continuous funding since 1979. He has supervised 48 pre- and post-doctoral trainees and has served in various leadership positions at Georgetown University, federal grant review committees, editorial boards of nine medical journals and scientific societies including as President of the American Society of Pediatric Nephrology (1990-91). He has received numerous awards including a prestigious award from the American Heart Association (2003) for his contributions to hypertension research and his research was one of the successes cited by the National Heart, Lung and Blood Institute to justify its 2004 budget to the US Congress. He is also listed in many Who's Who publications. By any measure of success, I believe Dr. Jose has achieved a remarkable level of accomplishment in his field that deserves to be recognized and celebrated by PAASE."



Dr. Jose is an outstanding researcher we need to recognize and should be very proud of.
Source: Letter of Josefino Comiso, member PAASE Board to PAASE membership

PAASE MEMBERS AND THEIR ACTIVITIES

PAASE Members Are Always Busy

Majority of our PAASE members are pursuing PAASE objectives as part of their full-time job as scientists and researchers, and care providers. Others can achieve the goals and objectives of PAASE in the various professional development and outreach activities, using their skills and knowledge in science and technology as part of their community-based mission. Individual PAASE members in addition to their full time work are also associated and involved in the development of new ideas and approaches for the maintenance, growth, and sustainability of our mother country through various outreach projects. These are few examples of our PAASE members and their activities. There is a lot more of our PAASE members, and I need your help to identify and announced their worthy endeavors.

Angel De Dios' Activities on the Web

Internet Resources for Paete Elementary Schools Angel de Dios has been very busy this summer in establishing web linkages for the various schools in Paete, Laguna. Check the following websites for: 1). how much you know about Paete's elementary schools <http://school.discovery.com/quizzes31/acdios/PaeteSchools.html>; 2). PAETECH's message (unravel it) <http://141.161.23.43/samplepuzzle.png>; 3). PAETECH's Board <http://school.discovery.com/worksheets31/acdios/112051043929545su4.html>; 4). PAETECHS's mission statement, but first find the names of Philippines presidents <http://141.161.23.43/presidents.htm> The Oracle Foundation is currently exploring the possibility of launching their "Think.com" program in the Philippines and this page is from the trial account with them. Angel says: "Nothing says it better than pictures do." <http://try.think.com/pls/tc3/think.page?p=629502&m=VIEW> If you are interested in this outreach activity you can reach Angel at: Address: Dr. Angel C. de Dios, Ph D is an Associate Professor and Director of Undergraduate Studies Department of Chemistry, Georgetown University 37th and O Sts., NW, Washington, DC 20057 202 687 0670, dediosa@georgetown.edu, <http://bouman.chem.georgetown.edu>

In our continuing quest to improve teaching effectiveness, there is always room to expanding the library holdings and media resources at the various institutions of higher learning in the country.

Increasing the library holding has been pursued by the following PAASE members: Vicky and Benjie Abellera and Sheilachu Gomez:

Building an Institution Library - Books, DVD, educational tapes, photo scanners, laboratory apparatuses were sent to Araullo High School in June of this year as "Alay ng Class of 1960". Two FOREX boxes were also sent to the UP Main library, UP Baguio, St. Louis University and Maryknoll Ecology Center. This is a Library Education Project of PAASE members Victoria C. Guerrero and Benjie Abellera of the Dativa Cristobal Foundation (DCF) based in Baguio City, Philippines.

DCF also co-sponsored the U.P. Social Science Faculty Symposium held at the UP Baguio in cooperation with the Mt. Province National Museum in March 2004.

Building a Children's Library

HASIK BAGONG BUHAY CHRISTIAN SCHOOL INC., Tagpuan St., Bayog, Los Baños, Laguna, Tel. No. (049) 536 – 645

Sheilachu Ching Gomez, PAASE member is instrumental in raising funds to send books and educational materials to Los Banos, Laguna.

"It is not only the HBBCSI pupils who are using the library, but also the church members, and their friends. There is a sign board hanged outside saying

"AKLATANG BAYAN NG LOS BANOS, LIBRARIES FOR THE CHILDREN OF LOS BANOS." to make the people aware that there is an existing community library.

Hasik Bagong Buhay Christian School Inc. faculty, staff, and pupils we would like to extend our

gratitude and appreciation to the people behind this worthwhile project. Ching can be reached at:

spgomez@bellsouth.net (Sheilachu 'Ching' P. Gomez) or *flbc_ching@yahoo.com*

U.P. Modernization Fund - Crisostomo Garcia and his wife Tina continue to support the U. P. Foundation through the Crisostomo and Tina Garcia Foundation.

Al Albano, Ed Padlan and Amador Muriel's project to honor Ray Punongbayan in the form of a scholarship fund in his name.

Al Albano's letter to the general membership (See Al's Open Letter) is a testament as to how a PAASE member brings credence to the role each of the PAASE members as an individual.

PAASE members Vicky and Ben Abellera provide extension instructions, lectures and applications of principles and theories about urban agriculture, horticulture, landscaping, and master gardening to students in horticultural therapy, sustainable agriculture, and urban gardening at Jean Jugan and the Little Sisters of the Poor in Washington, D.C.

Raffy and Minda Guerrero's work in fisheries and aquaculture, thus providing fishery related jobs and modernization of fish ponds, etc. and aquaculture in Los Banos.

The energy work as a consultant of Ernie Terrado in South America

Free AIDS and TB Clinics, roving international immunization clinic, various medical missions are provided by few of our PAASE members in the field of medicine unbeknownst to us all.

Carmelita Tuazon, Thelma Tupasi, and Isabel Guerrero to name a few. We are definitely moving in the right direction and has been sustaining and producing the volume of high quality outreach work by our memberships, as they continue to develop and depend upon new ideas and approaches for the maintenance and growth of the individual PAASE members and the various programs they are involved in.

As an organization, PAASE established fund drives and contributed to the following academic and practical endeavors:

1993, 1998 - Memorandum of Agreement between PAASE and the Philippine Department of Science and Technology (DOST) facilitating the transfer of scientific expertise to the Philippines through tie-ins with PAASE members involved in research in the U. S.

1996 co-sponsorship of the International Conference on Lahar Amador Muriel is the director of the Centre for Fluid Dynamics.

Contributions given to the University of the Philippines Los Banos Foundation.

1981, 1993, 1998, 2000, 2002, 2005 - International Science and Technology PAASE Annual Meetings

2002 - Majority of PAASE members provided generously to PAASE's project to adopt a Classroom to the GMA Adopt a Classroom Project

2004 Sustainability of the Severino and Paz Koh Lectureship Award. Dr. Koh and his wife Paz donated a lump sum amount of \$ 5,000 to provide awards in science and engineering. A monetary award is given to the recipient. Some recipient volunteered to return the award.

2005 Annual PAASE APAMS Fund Drive for Student in support of 54 student attendees

2005 the singular generous contribution of Joey Comiso and others to the Koh Lectureship Award.

In the past, there used to be a TOKTEN (UNDP project) and Balik Scientist programs, PAASE members had the fortune to enjoy and serve our kababayans.

Ongoing PAASE members involvement as mentor(s) to young science students.

Ongoing PAASE members involvement in their own professional development, community service, and public service both local and abroad where PAASE as an organization is also given the credit and share in their limelight (Sulo Newsletter 3(1) 3, 1996.

Ongoing PAASE members involvement to contribute to the sustainable development of the Philippines, such as in kind contributions to a school, a community, etc already identified in this issue.

Ongoing PAASE members Sevilla Detera-Wadleigh, Toto Olivera, and Ed Padlan, involvement by providing post doctoral traineeships, lab space, etc. in the U.S. to faculty members in the Philippines (*See Al's Open letter to PAASE*).

The various activities of PAASE members using their time and efforts doing what's best that they do, to better humanity, identified and unidentified, are PAASE's greatest unsung achievements.

The credit given to the achievements of a PAASE member is a credit to the Academy.

Editor

eLETTERS TO AND FROM PAASE MEMBERS

Letters posted by a PAASE member to the PAASE memberships are generally kept on file and posted to benefit those who missed reading them. It is also a proactive way to solicit initiatives and assistance to the proponent for much needed assistance or interest. Interestingly, some of these letters became a source of a forum for discussion and inspiration to others.

Date: 6/30/2005 11:08:14 AM Eastern Standard Time
From: dediosa@georgetown.edu (Angel C. de Dios)

Dear all:

I received a note yesterday from one of the principals of the elementary schools in Paete, Laguna. Quinale Elementary School principal Warlita Valdellon wrote:

".....the Quinalian teachers and pupils are now viewing your Young Paete website whenever they are off or during their classes. wala po kaming masabi kundi (There is nothing we could say but) thank you very much.... talagang-talaga pong kapaki-pakinabang! (It is truly and remarkably helpful) Looking forward for more unselfish deeds, words, knowledge, etc...You're great! See you soon in our school."

The site <http://141.161.23.43/batangpaete.html> is in preparation for my three-week sessions with the parents, teachers and students of the schools. These sessions would seek to promote the use of internet resources to enhance the learning of students in the elementary schools of Paete. Paete has three elementary schools in which we helped built computer classrooms and with financial help from Professor Eric Oldfield of University of Illinois, all schools and the municipal government of Paete are now subscribed to a DSL provider.

Thanks for your time and attention.

Sincerely,
Angel

As a summary, we have accomplished the following to meet the objectives of introducing the internet as a community strengthening tool and as a resource for learning and teaching:

(1) Parents and teachers have been introduced to Usap Paete forum and the number of messages in the following forum;

<http://paete.org/forums/viewforum.php?f=1>

demonstrate that the teachers, parents and pupils are now using our forum to convey messages to Paetenians worldwide.

(2) We now have seven teachers as members of this mailing list. These teachers have given their word to keep this line of communication going so that we could begin an internet based mentorship and collaboration.

(3) Several examples of ways to enrich learning and teaching inside the classrooms were shown to all participants. The examples were taken from;

<http://141.161.23.43/batangpaete.html>

(4) Six teachers (2 from each school) have been trained on composing web pages. Each school now has a website;

<http://141.161.23.43/central/pes.htm> (Paete Central)

<http://141.161.23.43/ibaba/ies.htm> (Ibaba)

<http://141.161.23.43/quinale/qes.htm> (Quinale)

These web pages contain all relevant information that we need to propose, study and design new projects for the schools.

(5) Six teachers (2 from each school) are now members of the DiscoveryOnline Custom Classroom and the SMILE project at MSU.

Subj: RE: Internet resources for Paete Elementary Schools
Date: 7/2/2005 7:55:06 AM Eastern Standard Time
From: Amador.Muriel@cern.ch (Amador Muriel)

To: jaranda@med.wayne.edu (Aranda, Jacob), dediosa@georgetown.edu (Angel C. de Dios), EdPadlan@aol.com

Dear Fellow Members:

I am glad to see that we as a group are using the Internet to assist us in addressing Philippine science efforts. As you know, some of us have had a long-term collaboration with Filipino graduate students (Ed Padlan, Toto Olivera, among others). I now want to share with you some activities which you may find encouraging.

Attached are two papers, one published by Jirkovsky and Bo-ot, and another one drafted by J.A.F Balista and myself. The first two were my Ph.D. students in Manila some ten years ago. They are now publishing on their own. Balista is a UP undergraduate, whom I have never met, except that he may have listened to my talks as a high school student in Philippine Science High School in Iloilo and read my Star Science articles. For those of you who are physically constrained to stay abroad, this is yet another way of collaboration, by email. Contacts begin with signed articles such as those submitted to Giselle Conception. I further encourage you to submit articles of a personal nature -- students need inspiration. Ed Padlan and Toto Olivera have published papers with students and young faculty, maybe we could do more of that.

In December, I will return to Manila to give talks to high school students and return our Center for Fluid Dynamics to Greenbelt, it has migrated around the world as I traveled in search of experimental proofs for our ideas (2 more attachments).

More for the correct use of the Internet!

Incidentally, as web master, Felix, could you not start a PAASE yahoo group? Sometimes the email addresses are longer than the message, and many are returned. Thanks.

Amador Muriel

An open letter to PAASE

Dear Colleagues, The following is really a response to some issues that Lino Blance raised a few months ago. I decided to make it an open letter because the issues that Lino raised are things that concern all of us and I think it is important that we all give them some thought. First, apologies to Lino for waiting this long to respond, and second, a disclaimer – I write this as a PAASE member and not ‘ex cathedra’ as Chair of the BOD. In the following, Lino’s comments are in red. **At some point we need to limit on how many new members to elect or be more selective to limit the number on a yearly basis. Is the intent to grow the membership without limits?** I think it would be a mistake to limit the number of new members. I firmly believe that everyone who is qualified and is willing to advance the aims of PAASE should be encouraged to become a member. We are all painfully aware that scientific and engineering research and science and engineering education in the Philippines face enormous problems. We all know that there is a lot that needs to be done and the more there are of us who would like to do something through PAASE, the better. A related issue is the relative numbers of the members in the Philippines and abroad. Ultimately, the impact we want to make is in the Philippines and having a relatively large base there makes it easier for us to know the situation "on the ground" as it were. We need to rely on our Philippine-based members to help in the implementation of projects directed to the Philippine audience even if these projects are conceived of and financed by members abroad. Indeed, we need the advice of Philippine-based members concerning the kinds of projects that are both potentially helpful and feasible. Moreover, if we plan on meeting regularly in the Philippines, we need Philippine-based members to help organize and run things. **I believe with your leadership, we can begin to develop a strategic direction for the Academy to navigate in the next decade. I am**

not sure at this point where this organization is headed. Are we happy with just having an annual meeting? Or should we be exploring other activities to foster the goals of this Academy? I am posing these questions (I do have more) to the PAASE leadership as a challenge. Rather than posing a challenge to the leadership, it should be directed to the entire membership. I think the strategic direction of PAASE is laid out in the constitution: “promote advancement of science and technology, ...” “encourage collaboration,” ... “provide means for transfer of scientific and technological advances,” [We may need to state those aims more crisply – which is something our new Committee on Constitutional Amendment – our very own Cha Cha Committee!! should think about]. What we, the members, need to do, it seems to me, is to devise the means, create the mechanisms, and implement the programs that make these goals realizable. Rather than relying on “the leadership” to do these, we should take advantage of the enormous pool of talent that our membership represents. Rather than waiting for leaders to tell us what to do or how to do it, we should tell each other what we have been doing, learn from each other about how things can be done, and encourage each other to do more of the same. We now have a number of examples of initiatives by our colleagues which we can emulate or improve upon, if we can. I will cite a few examples, with my apologies in advance to those whose efforts I fail to mention.

Toto Olivera has brought Filipino graduate students and postdocs to his lab in Utah for decades. The scientists who have worked with him, most of whom are now members of PAASE, form the bulk of the Marine Science Institute at UP Diliman which continues to be one of the most productive and internationally recognized research organizations in the Philippines.

Bobby Mariano years ago spent summers and parts of school years supervising the PhD dissertation work of economics graduate students in the Philippines. A number of his mentees have gone on to academia and government service in the Philippines.

Ed Padlan has had a number of Filipina postdocs [names?] working in his lab at NIH. They have since gone back to the Philippines. Since his retirement, Ed has been going to the Philippines spending one or two six-week periods each year lecturing at various universities and participating in the research program of AMOR [meaning?], which has received funding from DOST.

Amador Muriel has mentored a number of physics graduate students some of whom are now publishing in international journals on their own. He also ran [manages?] a privately funded fellowship program that enabled a few dozen students to go through engineering and science bachelor’s degree programs at UP Los Banos. The Fluid Dynamics Laboratory that he runs with support from World Laboratories, though somewhat itinerant, continues to function and will be the base for a planned fellowship program in geosciences to honor Ray Punongbayan.

Joe Cruz has been involved in formulating science and technology policy in the Philippines for decades.

Ben de Lumen has brought Filipino graduate students and postdocs to his labs at UC Berkeley.

Giselle Concepcion, in addition to her research and teaching at the Marine Science Institute, has been the prime mover of the weekly Star Science column in the Philippine Star. A number of us have contributed pieces to this series. *If you have not yet contributed or are ready to contribute again, Giselle is waiting to hear from you!!*

Angel de Dios has launched a web-based forum for the teachers and students of the Paete, Laguna schools.

Judy-Ribaya Mercado’s research deals with Philippine-based subjects, and she manages to do some lecturing in Philippine schools during her field work there.

Many of our colleagues who went to the Cebu meeting gave lectures at local schools and universities in connection with the meeting. As far as I know, Felix Buot is still there exploring possible collaborations with colleagues at the University of San Carlos.

Seville Detera-Wadleigh has been back to the Philippines twice this year. During her first trip, she brought a number of Philippine-based PAASE members with her to speak at a science forum at her former high school. She again gave talks when she was there for the Cebu meeting.

Eddie Mendoza, a newly elected member, has for years been splitting his time between his university in Germany and UP Diliman where he is a Visiting Professor of Mathematics. He is also arranging for Filipino scholars to undertake education and research visits to Germany.

I am sure there are many more examples than I can muster from my aging memory, and to those colleagues whom I do not here acknowledge, again my apologies. The point behind all this is that many of us are inventing and implementing strategies to further the aims of PAASE. One important thing that PAASE can do is to enable and encourage us to inform each other of what is being done in the hope that more of us will do more of the same, or do better. Our annual meetings enable us to inform each other not just of our research work but also of our efforts to help. They also provide opportunities for us to explore possible collaborations, test the feasibility or the implementability of our plans, or get advice from our colleagues about the suitability of our plans to local conditions. Judging from the comments of our colleagues who were there, the Cebu meeting seems also to have succeeded in getting students to present their research results in addition to giving them the opportunity to interact with their mentors and colleagues both from the Philippines and abroad. I get the impression that subsidizing student participation was viewed as a good thing, indeed. I think that the hierarchical model of an organization with leaders who set the tone and determine direction on the one hand, and members who implement the leaders' plans, on the other, is not appropriate for PAASE. We are, after all, a collection of independently-minded experts of proven competence and productivity. What brings us together is a dedication to science and technology and a desire to make these accessible to more Filipinos in the hope of helping alleviate some of the country's many ills. More appropriate to PAASE, it seems to me, is an emergent model, in which the interactions of many independent agents eventually lead to the emergence of beneficial collective behavior that is greater and more effective than the sum of its parts. I seem to have gotten carried away, but I ask you to think about these things, and let everybody else know what you think. Who knows, something good may emerge. All the best,

Alfonso M. Albano (610) 526-5359 Department of Physics Bryn Mawr College 101 N. Merion Ave. Bryn Mawr, PA 19010

OTHER NEWS

The International Commission for Optics has given National Institute of Physics Director Dr. Ceasar A. Saloma (BS'81; MS'84; PhD'89) the 2004 Galileo Galilei Award in recognition of his outstanding contributions in optics which were achieved under comparatively "unfavorable circumstances," such as "difficult economic or social conditions or lack of access to scientific or technical facilities or sources of information."

At the University of the Philippines, Saloma introduced the Femtosecond Laser Facility – a first in the country – which allows for near precise machining of everything from steel to tooth enamel to very soft materials like heart tissue. (Source: Carillon Newsletter February-May 2005)

Isabel C. Guerrero, M.D., hospital epidemiologist and consultant at Toms River Community Medical Center in New Jersey, was one of eight infectious disease specialists in the State of New Jersey who were chosen by their peers for excellence in their specialty. Of the 272 doctors in 54 specialties who made the list of New Jersey's best physicians, only Guerrero and an eye doctor practice their craft in Toms River. (Source: "Top Doctors 2005" in *New Jersey Monthly*, September 2005. pp. 86-89; 110-141).

Dear PAASE members, [date of letter?] I am delighted to share with you the wonderful news that our very own newly-elected PAASE member and colleague, Florentino S. Solon, MD, MPH, will be the recipient of

the prestigious International Union of Nutritional Sciences (IUNS) Award for this quadrennium. This award is given to an outstanding Public Health Nutrition Scientist worldwide every 4 years when the IUNS meets at an International Congress of Nutrition (ICN). The next ICN will be held in Durban, South Africa on September 19-23, 2005 and Dr. Solon will be conferred the award and address the delegates at that time. Happily, I shall be there as I am presenting data recently obtained from our study in Bataan. It has been my privilege and pleasure to be able to conduct research studies in rural Philippine communities in collaboration with Dr. Solon and the staff of the Nutrition Center of the Philippines. This award to Dr. Solon by the international nutrition community in recognition of his many contributions to the field is something that we, as PAASE members and as Filipinos, can be very pleased about. Judy Ribaya-Mercado
Judy D. Ribaya-Mercado, Sc.D. Scientist
Jean Mayer USDA Human Nutrition Research Center at Tufts University
711 Washington St. Boston, MA 02111 USA

PAASE AND ITS MISSION

PAASE OBJECTIVES:

1. To promote the advancement of science and technology and to encourage collaborative work among scientists and engineers in research and development;
2. To support interaction among United States citizens of Philippine descent, residents of the United States and other countries of Philippine descent, in scholarly and scientific endeavors that would be of particular benefit to the United States and the Philippines;
3. To provide a means for transfer of scientific and technological advances between the Philippines and the United States.

There are individual PAASE members who regularly engage in basic research in science and technology. That is their job. As a group, however, we are not yet producing the volume of high quality work that should be associated with our numbers. Why is this so? The problem is financial. More of the members must become involved, but we are not.

PAASE TREASURER'S REPORT

Dr. Jean Tiong

The financial statement provided in the table below covers the period from December 1, 2004 (when I took over from Liza Virata) to August 15, 2005. Although PAASE met on several occasions, including welcome events for members visiting Washington DC area, Christmas Party, and special meetings for APAMS, no cash outflow from PAASE funds was incurred because funds to cover expenses were collected from participating members.

To finance our major activity (25th APAMS), which was held on June 24-26, 2005 in Cebu City, Philippines, a fund raising activity was launched from December 2004 to June 2005. PAASE's initial goal for the 25th APAMS was to finance registration of all student presenters, which was initially projected to be approximately 40 students. However, as abstracts from the Philippines were received in May 2005, it was clear that there were more students presenting in the meeting than projected. In the end, PAASE had to raise funds to cover in full the registration of 54 student presenters, each amounting to P3000.00 (~ \$60.00).

About 6 weeks before the meeting, PAASE was alarmed upon realizing that the Philippine fund drive and sponsorship for the Cebu meeting was not doing as well as expected. With only two confirmed sponsorships and no clear indication of sponsorship from other institutions and companies at that time, PAASE members in Washington DC, Maryland and Virginia met in an emergency meeting to discuss ways by which PAASE could lower the projected meeting expenses and find means to finance the meeting. As a result of this meeting, PAASE mounted an all-out financial drive to raise funds to meet expenses for the meeting. The treasurer and Amador Muriel (informed by Giselle Concepcion) made PAASE members aware of the financial crisis with respect to funding for the meeting, and with that started a major campaign to raise more funds for the meeting. The financial crisis also mobilize the Philippine and Cebu Organizing Committees, chaired by Giselle Concepcion and Ramon del Fierro, respectively, to find more sponsors for ads in the souvenir program as well as exhibitors.

The result of all the above effort was a successful fund drive in the U.S. through funds provided by members and friends. A total of \$ 7060.00 was generated from members' pledges, and donations from friends and from a company based in the U.S. From the initial report provided by Ramon del Fierro, PAASE was able to provide full registration of all presenting students (\$3240) as well as partial registration for 12 non-presenting students (\$480). In addition, our fund drive in the U.S. was able to encourage a U.S.-based organization (Philippine Society for Neuroscience headed by Cesar Borlongan) to sponsor travel awards for 2 student presenters, providing \$100.00 for each student. In the Philippines, more sponsorships were obtained including DOST (Department of Science and Technology) that provided P 100,000.00 to finance in part the Souvenir Program and poster boards. Other company sponsors and exhibitors each providing at least P 20,000.00 include Philab Industries, Hybridigm Consulting, USC Water Resource Center, PLDT-Cebu Central II, SPI Technologies, Cebu Daily News and Fairchild Semiconductor International. Although the financial report is not complete at this time, pending financial reports from the Philippine and Cebu Organizing Committees, it is anticipated that we have raised more than enough funds to cover all of the meeting expenditures. Recently, the BOD chaired by Al Albano agreed that whatever excess funds generated from the Cebu meeting will be used for the future PAASE meeting.

On behalf of the PAASE officers and APAMS organizers, we would like to thank deeply each member and everyone who has helped support the meeting, financially and otherwise, to make APAMS meeting a success. We sincerely hope that you share our feeling of pride that we were able to reach out to our fellowmen through meetings held in the Philippines and also take pride in our ability to sponsor Philippine students to attend this international meeting.

Acknowledgments

Platinum Benefactor	Paz Koh
Gold Benefactors	Anonymous Rosemarie and Eduardo Mendoza
Silver Benefactors	Four (4) Anonymous donors Josefino and Diane Comiso Pedro Jose Carlito and Elaine Lebrilla Rozanno Locsin Joseph and Lileosa Tan
Bronze Benefactors	Anonymous

	Al and Connie Albano
	Lourdes and Robert D. Herold
	Philip and Felicitas Lacbawan
	Ben de Lumen
	Marjorie Medina
	Danilo Romero
	Richard Theimer and Maria Luisa Virata
	Seville and Robert Wadleigh
Patrons	Benjie and Vicky Abellera, and Isabel Guerrero
	Jean Tiong and Fred Koehler
Donors	Anonymous
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	Terry Sarigumba,
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Contributors	Antonio Alfonso
	Aldwin and Anne Anterola
	Xenia and Teodoro Tigno, Jr.
Corporate Sponsors	
Diamond Sponsors	Cebu Daily News, SPI Technologies
Gold Sponsors	Fairchild Semiconductor International
Exhibitors	Hybridigm Consulting Inc.
	Philab Industries Inc.
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	SPI Technologies,
	USC Water Resources Center
	Marine Science Institute
	College of Science, UP
	De La Salle University - Manila
	Chemline Scientific Enterprises
	University of Southern Philippine Foundation
	Cebu Northwinds Hotel
	Cebu Institute of Technology

University of San Jose Recoletos
Old World Financial Services, Inc.

Special thanks to: The Department of Science and Technology (DOST)

Thank you, Maraming Salamat! PAASE could not accomplish its 25th APAMS Anniversary Celebration without the generous support of the above individuals, corporations, and foundations.

Stay In Touch!

This is your newsletter. If you wish to include any information about the scientific community, our country, your research, and yourself in the Newsletter, please contact the editor or any member of the PAASE Editorial Board by phone or by email. We should like you to share happy family news as well, such as prizes, or honors received or milestones reached by family members. Let us know about such interesting things by giving us a call or dropping us a line. We look forward to hearing from you soon!

We are always within your reach.

Treasurer's Financial Report as of August 15, 2005

<u>Balance Forwarded</u>	<u>Balance</u>
from Liza Virata - PAASE funds (checking)	7,393.02
from Liza Virata - Lectureship funds	2,977.52
from Liza Virata - PAASE funds (savings)	25.08
from Marjorie Medina - Lectureship funds	379.60
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Total Balance forwarded	10,775.22
<u>Cash In</u>	
Donations received from members and friends	6,560.00
Donation towards lectureship funds from Paz Koh and Pedro Jose	2,000.00
Donation received from company	300.00
Dividends	7.36
US member registration for APAMS	4,300.00
US member hotel deposits for APAMS	2,530.50
US based guest registration	540.00
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Total Cash in	16,237.86
<u>Cash Out</u>	
APAMS meeting funds given to Giselle Concepcion	5,500.00
Computer website maintenance c/o Felix Buot	100.00
Plaques made for APAMS c/o Dan Romero	146.00
Member registration paid to Ramon del Fierro (USC)	4,300.00
Hotel reservations paid to Ramon del Fierro (USC)	2,530.50
Guest registration paid to Ramon del Fierro (USC)	540.00
Bank transfer fees (2 transfers)	60.00
Lectureship Award given to Pedro Jose	1,000.00
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Total Cash out	14,176.50
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Balance (Total Cash In - Total Cash Out)	2,061.36
Cash on hand as of August 15, 2005	12,836.58
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Collectibles: members' pledge	200.00

Certified Correct:
Jean Tiong, PAASE Treasurer

JeanJJ