

Montanyosa Haven

A publication for research, development, and extension.

MPSPC Joins Nat'l Seminar-Workshop and Research Forum

Three instructors from the College of Engineering and Technology (CET) represented MPSPC to the back-to-back national seminar-workshop on "Building and Sustaining Learning Communities: Towards Preparing Students for Life in the 21st Century and Beyond" and Research Forum on Educational Leadership, Teaching and Learning" at the Ramon Magsaysay Technological University in Iba, Zambales on July 28-29, 2005.

The Research and Educational De-

velopment Training Institute and RMTU jointly sponsored the event.

In the research forum, David Fomeg-as presented his research on "Multi-farm Trial of Biological Nitrogen Fixation (BNF) Technology on Beans (*Phaseolus vulgaris*) in Mountain Province", Estrella Basco presented their research with David Fomeg-as, Norma Bay-os, Mary Dumanghi, Angela Dangis, Clemencia Opig, Rosaline del Rosario, and Angelina Laban on "Socio-cultural and Political Sig-

(continue to page 5)

Inside this issue:

CET Holds 1st R & D/E Symposium	2
Wawalitan . . . Ano Ito?	2
Ang Ritwal na Walit	2
Contrast Dills in Second Language Teaching	2
Newsbrief	3
CET Faculty Joins Southeast Asian Conference Abroad	6
Research Abstracts	7



Researchers Norma Bay-os, Estrella Basco and David Fomeg-as present their studies to fellow researchers and educators at RMTU, Iba Zambales on July 28-29, 2005.

Usec. Dominguez Graces MPSPC's 14th Charter Day

Josephine dC. Dominguez, under-secretary for political affairs, was the guest of honor and speaker during the 14th Charter Day Celebration of Mountain Province State Polytechnic College (MPSPC) on January 17, 2006 at the Eyeb Grandstand, Bontoc, Mountain Province.

In her speech, Dominguez highlighted the accomplishments of her hus-

band, Rep. Victor S. Dominguez of the lone district of Mt. Prov., primarily on education and health.

Among which are the transfer of P10 million to MPSPC as payment for the tuition fee of its students and the distribution of P8 million to various hospitals in Metro Manila and Baguio City as aide to health needs of the constituents of Mt.

MPSPC Turns Fourteen: varied activities done

To celebrate its 14th charter day, Mountain Province State Polytechnic College mustered its faculty and staff, and students early in front of the administration building at the main campus on January 17 of this year to start off the day with a parade.

The parade culminated at the Eyeb ground where the Reserved Officer Training Corps Cadets performed a pass and review before the program proper.

Among the guests present to grace the occasion were Usec. Josephine dC. Dominguez, Gov. Maximo Dalog, and BM Herman Cobcobo.

The highlight of the program was the wearing cultural presentations of 13 student organizations from the campuses.

Province.

The money came from the scholarship funds of the National Commission on Indigenous Peoples in the amount of P3 million and the remaining seven from the priority development fund of the Congressman.

The Undersecretary commended also the support

(continue to page 5)



Usec. Josephine dC. Dominguez delivers her piece as guest of honor and speaker of MPSPC's 14th charter day.

WAWALITAN . . . Ano Ito?

Ang Wawalitan ay isang lugar. Dito itinatag ang dalawang luklukan ng karunungan: ang Mountain Province State Polytechnic College—College of Engineering and Technology (MPSPC-CET) at ang Tadian School of Arts and Trades (TSAT).

Noong unang panahon, ito ay isang kagubatan na pinangangasuan. Nang lumang ay naging pastulan na nang dumalang ang mga punongkahoy.

Isang bahagi nito ay ginawang pampaaralang kampus noong 1963, sa pamumuno at panunungkulan ng yumaong Kongresista Luis Hora. Nakipag-unawaan at nakipagkasundo ang pinuno ng MPSPC, Dr. Marcelino Delson at Representatibo ng Mountain Province, Victor Dominguez para sa pagkapagpalaki o ekspansyon ng kampus noong 1992 at tagumpay nilang nasagi ang mapagkawanggawang puso ng mga angkang Keeg, Laban at Oting ng Poblacion, Tadian na nagkaloob ng ilang bahagi ng kani-kanilang sakahan sa bandang itaas

ng Wawalitan.

Isang mataas na bundok ang Wawalitan. Sa taluktok nito ay matutunghayan ang mga kalapit-barangay, bayan at probinsya na nakapalibot dito. Sa hilaga ay pinanununghan dito ang lalawigan ng Ilocos Sur at ng mga nayon ng Mabalite at Lubon ng Bas-ang o Ikalawang Sona ng bayan ng Tadian. Makikita dito ang Demang o pangatlong sona ng bayan at ang muisipyo ng Bauko sa timog. Sa silangan ay ang mataas na tanikalang bundok na hangganan ng barangay Bagnen ng Bauko at ng Poblacion, Tadian; at sa kanluran ay matutunghayan ang mga nayong Kayan at Bunga ng Tadian, at mga probinsya ng Benguet at Ilocos Sur.

Pinapaligiran ng mga lupang pansakahan ang paanan ng bundok na ito. Ang mga kataasang sakahan ay ang Makbas, Gidaw, Dadanupan, Tumapaya, Igan at Paliwak. Ang dalawang nahuhuling sakahan sa bandang

(continue to page 5)

Contrast Drills in Second Language Teaching

Contrast drills in Second Language Teaching is one of the avenues to improve one's communication skills. It is an extract from the pronunciation drills in SLT made by the members of the Philippine Center for Language Study.

Contrast drill is the most important single type of pronunciation drill. It consists of a minimal pair of words alone, in a

phrase, or in a sentence context.

A minimal pair is two identical words different in one sound like pan-ban, pin-bin, pull-bull, rupee-ruby, cup-cub, and mop-mob. In the examples, the contrast is p—b in initial, medial, or final position in a pair of words. Minimal pair is an ideal teaching device that illustrates the phonemic system of the

(continue to page 5)

CET Holds 1st R&D/E Symposium

Done at last! The first Tadian Campus Research & Development and Extension symposium was held on July 19, 2005 at the conference room.

The R & D/E symposium is an avenue of sharing researches or studies of faculty members to their colleagues.

Three researches on agriculture and one each on environment, curriculum, socio-cultural and teacher education were presented.

Faculty members who shared their studies were Dr. Rachel Maguen, Dr. Marcelino Gaqui, Mrs. Norma Bay-os, Mrs. Estrella Basco and Mr. David Fomeg-as.

Mr. Fomeg-as, then campus research coordinator, initiated the activity in response to a suggestion from one member of the faculty during a meeting that "researches of faculty members should be presented in the school first before they are presented outside".

Only few faculty members attended the whole-day activity. Research students of Mrs. Lilian Banglo were also present during the morning session.

Ang Ritwal na Walit

Kung ang isang tao ay may sakit at binigyan ng ilang herbal o komersyal na gamot pero hindi gumagaling, siya ay isinasangguni o ikinukunsulta sa isang *menki-yab* o midyum sa daigdig ng ispiritu o ibang daigdig. Pati kamag-anak ng mayayamang pasyente ay nakikiusap sa isang midyum kapag sinukuan ng mga propesyonal na doktor ang maysakit.

Tahimik na makikipagtalastasan itong midyum sa mga ispiritu o namatay at isasangguni niya sa kanila ang kalagayan ng

(continue to page 6)



Stairway to the Engineering department under construction. A canopy was installed for convenience of passerby during rainy season.

Newsbrief

- Representative Victor Dominguez allots part of his development fund to subsidize tuition, miscellaneous, and laboratory fees of Mountain Province students to enroll in MPSPC this June 2006. This move contributes to education development of his constituents.
- The re-survey visit of the Teacher Education program of MPSPC by the Accrediting Association of Chartered Colleges and Universities in the Philippines (AACCU) is set on August 7-12, 2006. Members of the faculty and staff of the College are doing their best in preparation for the accreditation.



Leaf beetles cause agricultural damage by feeding on leaves of crops. The photos above show a green beetle feeding on the leaf of taro or gabi (*top*) and the extent of damage (*above*) thereafter.



Azolla, locally known as *kul-kulip*, may not be a weed. It can be used to fertilize rice and other crops when plowed under to allow it to decay or when used as compost (*below*).



Diversity of plants under pine forests (*top left photo*) may not only be affected by the growth of pine trees but also of fires that destroy seedlings and other plants within its reach. Burnt bark of a tree bears evidence of unabated forest fires (*middle left photo*).

Community involvement in academic studies is important to impart indigenous knowledge in research. Mrs. Dina Coplat, Norma Bay-os, and Rosa Cawalo (*left photo*) take a breath of fresh air after identifying various plants of their local names in the forest and gathering plant samples for further identification for the study "Phytodiversity Under Pine Forest Community in Tadian".

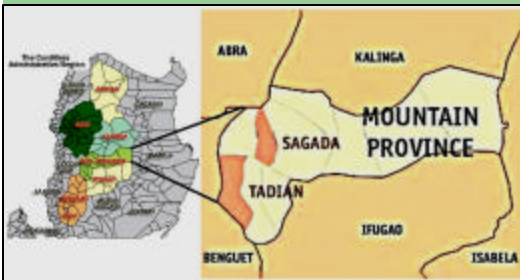


Prepared by David Y. Fomeg-as

BIOLOGICAL NITROGEN FIXATION (BNF) TECHNOLOGY NEED-ASSESSMENT OF BEANS (*Phaseolus vulgaris*) IN SELECTED FARMS OF MOUNTAIN PROVINCE

David Y. Fomeg-as¹, Tessie M. Merestela², Jose G. Balaoing², and Maria Luz D. Fang-asan²

Mt. LUSTRI Annual
 Meeting & Symposium
 2005
 12-13 March, Nueva Ecija State
 University, Philippines



WHERE? Farm trials were done in the Municipalities of Sagada and Tadian, Mountain Province.

INTRODUCTION

- ☞ Beans are common crops in some places of Mountain Province.
- ☞ Organic agriculture entails minimal use of inorganic fertilizers.
- ☞ Biological nitrogen fixation (BNF) technology can be an alternative directly or indirectly to inorganic crop fertilization.
- ☞ Very few farmers know and use BNF technology.
- ☞ Generally, legume yields are increased through N₂-fixation.
- ☞ Environmental variations may constrain BNF.
- ☞ Indigenous *rhizobium* or inoculum may not be effective.
- ☞ Field trials assess *rhizobium* effectivity or infectivity and the need of inoculation.
- ☞ *Rhizobium* is a soil bacteria capable of forming symbiotic root nodules and of fixing atmospheric nitrogen.

MATERIALS AND METHODS

- ☞ On-farm trials were done in Tadian and Sagada, Mountain Province with semi-temperate climate.
- ☞ Selected farmer cooperators were Mrs. Lilian T. Banglo and Elordes R. Kidicdian of Egan and Amgayang, Tadian; and Mrs. Carmen M. Pomeg-as of Ambasing, Sagada.
- ☞ Treatments were laid out in randomized complete block design (RCBD) in 2-3 replicates depending on farm orientation and size.
- ☞ Plot size was 0.5 m X 5.0 m or close to this.
- ☞ Activities were done simultaneously at the three farms.
- ☞ Agricultural lime (CaCO₃) was applied three months prior to sowing.
- ☞ Pole kidney bean ('Alno' cultivated variety) was used.
- ☞ Inoculation by coating with *Legumin*, a commercial inoculant, was at a rate of about 1 tbsp./kg seed.
- ☞ Statistical tools used were, analysis of covariance for estimating missing data in a RCBD, analysis of variance, Duncan's multiple range test, and simple linear regression and correlation.



TLC! Farmer cooperators Mrs. Lilian T. Banglo of Egan Tadian (left) and Mrs. Carmen M. Pomeg-as of Ambasing Sagada (right) take time out for a photo shoot.



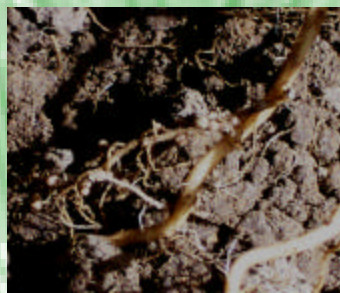
TO SEE IS TO BELIEVE! Farm trial is one way of convincing farmers to adapt technology. Photo at left was the trial farm at Amgayang, Tadian.

ABSTRACT

On-farm trials of biological nitrogen fixation (BNF) technology was conducted in Mountain Province to assess the need of inoculation for beans (*Phaseolus vulgaris*) and compare the technology with other agricultural practices in terms of nodulation and yield. Three farmer cooperators were identified and their farms were utilized for the trials. The farms are in Egan and Amgayang, Tadian and Ambasing, Sagada. Plots of each farm were laid out following the RCB design.

Inoculated beans showed higher nodulation than the uninoculated beans. Nodulation of beans on farmer's practice either limed or unlimed, were generally lower than the other practices tested. There was a significant and positive response to inoculation at Egan, Tadian farm, but negative both at Amgayang, Tadian and Ambasing, Sagada farms. This result implies a sparse population of indigenous *Rhizobium* in Egan, and an indigenous *Rhizobium* that can compete with the inoculated strain in Amgayang and Ambasing farms. Inoculation is thus required at Egan farm but not necessarily at Amgayang and Ambasing farms.

Generally, yield of inoculated treatments were lower, but comparable with the other treatments since differences were not significant. There was negative correlation, albeit linear, between the number of nodules and yield. This would imply the influence of some other factors on yield.



SMALL BUT TERRIBLE! Root nodules of beans formed and inhabited by a bacterium, *Rhizobium*.

TREATMENTS

- Farmer's Practice, FP—approx. 1 tbsp. T-14/hill, control (unlimed)
- FP (limed)
- BNF (limed)
- BNF + FP (limed)
- BNF + BFR (limed)
- Soil Test Kit Analysis (STK) with La Motte of N, P, and K
- Bean Fertilizer Requirement, BFR—30-100-40 kg NP₂O₅K₂O/ha



GO ORGANIC! A sample of the commercial inoculant used in the study.

OBJECTIVES

General: to conduct on-farm trials of BNF technology on beans (*Phaseolus vulgaris*) in Mountain Province

Specific

- to assess the need of inoculation (BNF technology) in some farms, and
- to compare BNF technology with other agricultural practices in terms of yield and nodulation

RESULTS

- ☞ Positive response to inoculation was observed in Egan farm.
- ☞ Inoculated beans had higher nodule counts than uninoculated beans, but generally had lower yields.
- ☞ Statistical analyses showed, differences on yields were not significant.
- ☞ Correlation between nodule count and yield was negative, albeit linear.

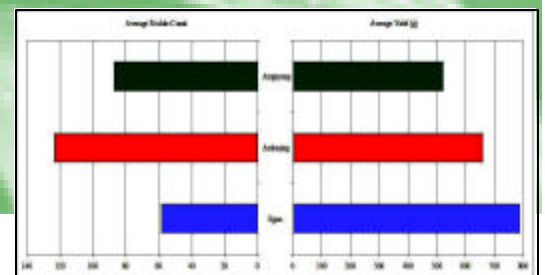
CONCLUSIONS AND RECOMMENDATIONS

Conclusions

- ✓ In Egan, Tadian, there is a need of inoculation; in Amgayang, Tadian, and Ambasing, Sagada, inoculation is not necessary.
- ✓ The *Rhizobium* in the inoculant, *Legumin*, was able to adapt to existing climatic condition, survive, and compete with the indigenous population of *rhizobium*.
- ✓ BNF technology is still of advantage compared to farmer's practice, because it is environment- friendly.

Recommendations

- ☞ Disseminate BNF technology to encourage organic farming or sustainable agriculture and decrease soil-related problems or pollution.
- ☞ Inoculate beans to ensure sufficient number of *Rhizobium* in the soil at sowing.
- ☞ Do more farm trials to assess the need of inoculation.



SIZE DOES MATTER? Good nodulation does not always equate to higher yield, because the *Rhizobium* may not be effective.

¹ Mountain Province State Polytechnic College, Bontoc, Mountain Province
² Benguet State University, La Trinidad, Benguet

MPSPC . . . (from page 1)

nificance of Ethnocide to College Students of Baguio City”, and Norma Bay-os presented their research with David Fomegas and Jose Atayoc on “Phytodiversity Under Pine (*Pinus insularis*) Forest Community in Tadian, Mountain Province”.

Various researchers and educators from different colleges and universities nationwide participated in the seminar-workshop and research forum.

In a related news, Rachel K. Maguen of the same campus presented her research on “Integration of the Cultural Elements of Mountain Province in the Curriculum of MPSPC” during the National Conference on “Building and Sustaining National Community Through Reaffirming Filipino Cultural Identity: Toward Meeting the Challenges of the New Millennium”. The conference was held on November 16-18, 2005 at Benquet State University.

Participation to national and re-



Poster on “BNF Technology Need-assessment of Beans in Selected Farms Mt. Prov.” exhibited during the 9th Philippine Society of Soil Science and Technology (PSSST) Annual Meeting and Symposium at Central Luzon State University on June 1-2, 2006.

Contrast . . . (from page 2)

target language.

In Philippine society, persons with very good enunciation, articulation or correct pronunciation are admired and have better chances of getting employed as professionals abroad.

To improve your communication

gional presentations, symposia or fora is one way by which colleges and universities earn points in the State Universities and Colleges (SUC) leveling.

Usec . . . (from page 1)

of the local officials and municipal mayors led by Gov. Maximo Dalog for extending financial assistance to the College in the amount of P10 million to complete its building and establish the nursing laboratory.

Dalog, who was also a speaker, added that children from the province should finish their college studies, because “MPSPC is here to provide tertiary education”.

Wawalitan . . . (from page 2)

silangan ay napakabilis lumaki sa populasyon ng tao dahil sa kanilang kalapitan sa mga paaralan ng TSAT at MPSPC-CET pati na sa Poblacion o Tadian Proper.

Ayon sa isang nakatatanda, ang Wawalitan ay isang lupaing panseremonya o pangritwal. Dito tinatawag ang nawawala o naiwang kaluluwa ng isang mayasakit o patay na tao sa mga kalapitanayon, bayan o probinsya upang umuwi sa Poblacion. Pinangalanan itong pook para sa *walit rite* o ritwal na walit dahil sa kanyang makabuluhang anyong-lupa, na siyang pinakamataas na bahagi ng nayon na pinanununghan ng maraming nayon, bayan at lalawigan.

Isa pang nakatatanda ang nag-uugnay ng Wawalitan sa isang *kawitan*. Ito ay ang alagang tandang ni Lumawig. Si Lumawig ay isang diyos mula sa Daya o Kalangitan na bumaba sa lupa at namuhay sa Kayan, ang pinakapuno ng Bundok Wawalitan pakanluran. Nang puntahan ng mga tao ang tuktok ng bundok, may nakita silang bukal o batis sa baba ng sanga ng kahoy na dinapuan ng tandang. Ipinalagay ng mga taong nakasaksi na ang tubig ay

skills, follow these contrast drills steps:

1. Proceed from the known sound to the new one.
2. Determine the category of sounds of the new word.
3. Pronounce the word pair with the same intonation in order not to confuse people with differences other than the sound contrast being illustrated.

CET . . . (from page 6)

alumni throughout the country, they represented the Philippine Federation of Japan Alumni (PHILFEJA) in the conference.

PHILFEJA is a federation of various Japan alumni organizations in the country that includes Association of Philippine Private Alumni of Japanese Universities (APPAJU), OMNI Ventures Incorporated, Philippine Association of Japan Airlines Scholars (PHILAJALS), The Philippine Cultural and Technical Association of Returned Overseas Scholars (PHILCULTAROS), The Philippines-Japan Fellows Association (PHILJAJA), The Philippine JASCAA (Japan Solidarity Committee for Asian Alumni) Youth Club (PJYC), Samahan ng mga Pilipinong Nag-aral at Nanirahan sa Nippon (SAPILNIP), and the PHILAJAMES.

The conference, with the theme “ASEAN-Japan Partnership, Scaling New Heights and Riding New Challenges”, was participated by the Old Japan Students Association of Thailand (OJSAT), Myanmar Association of Japan Alumni (MAJA), Japan Graduates’ Association of Malaysia (JAGAM), Association of Indonesia Alumni from Japan (PERSADA), PHILFEJA, and the host association—The Japanese University Graduates Association of Singapore (JUGAS).

Prof. Takashi Tajima of Asia Japan Alumni (ASJA) International served as guest of honor. In his speech, he highlighted the role of Japan and ASEAN in keeping a dynamic and enduring partnership in the new millennium for peace and prosperity of the world.

His Excellency, Takaaki Kojima, ambassador of Japan to Singapore delivered also an opening address.

bumukal mula sa lupa nang malakas at maraming beses tumilaok ang tatyaw.

Bilang alaala sa pagdalaw nina Lumawig at ng kanyang alaga sa tuktok ng bundok, pinangalanan ng mga ITadian ito ng Wawalitan.

4. Identify and present one pronunciation problem at a time.
5. Use familiar words whenever possible.
6. Don’t overdrill. It should not take too much class time. Three or four minute is a reasonable period for drill on a single problem.
7. Drill on word pairs should be followed by drills on minimal sentences.



Mountain Province State Polytechnic College

College of Arts and Sciences
Bontoc 2616, Mountain Province
Philippines
Telefax: (63)(74)602-1014

College of Engineering and Technology/
College of Forestry
Tadian 2620, Mountain Province
Philippines

Visit us on the Web!

<http://mpspc.tripod.com>

Ang . . . (from page 2)

maysakit. Kapag nakuha na niya ang mga impormasyon mula sa mga ispiritu, sasabihin na niya ang susunod at dapat na gawin para gumaling ang may karamdaman. Papayuhan niya ang utusang tao ng pamilya ng maysakit na humanap ng isang malakas na tao na siyang bubuhay sa nawawala o gumaglang kaluluwa upang maiwi.

Itong utusang tao ay papupuntahin sa ritwalang lugar upang isagawa ang ritwal na *walit*. Magdadala siya ng tigkakaunting kanin, inasang karne at *tapey* o alak mula sa bigas. Haharapin niya ang lugar na pinaniniwalaang gingalahan o pinag-iwanan ng taong maysakit ng kanyang kaluluwa. Iaalay niya ang mga pagkaing dala niya sa lahat ng mga ispiritu upang sila ay makialam at tumulong. Tatawagin niya ang kaluluwa ng taong maysakit upang makiwi siya sa nayon. Kung sang-ayong umuwi ang nawawalang ispiritu, bubuhatin ito sa likod o balikat ng



MONTANYOSA Haven Staff

Research, Development, and Extension (R & D/E) Publication

Office Address: Teacher Education Department, College of Engineering and Technology
Mountain Province State Polytechnic College
Tadian 2620, Mountain Province

Chief Editor — David Y. Fomeg-as

Section Editors:

English — Rachel K. Maguen

Filipino — Estrella A. Basco

R & D/E — Norma W. Bay-as

Circulation In-Charge — Mary T. Dumanghi

Contributors — members of the Teacher Education Faculty



inatasang tagababa o tagapasan upang dalhin sa taong maysakit. Paglapit ng tagabuhay at utusang tao sa maysakit, kaagad-agad at milagrang gagaling at lalakas ito kahit pa ito'y nakaratay, na parang hindi nagkasakit nang malubha, maliban sa kanyang pangangayayat na daglian ding maibabalik sa dating pangangatawan.

Hindi para sa maysakit lang ang ritwal na ito. Ginagawa rin ito para sa isang patay. Kung and isang tao ay namatay sa ibang lugar at ang kanyang mga labi ay inilibing sa ibang lugar na iyon, at mananahimik lamang siyang hihimlay kung ito ay iuwi, magpaparamdam siya. Ipaalam niya ang kanyang mithiing maiwi sa pamamagitan ng pakikipag-usap sa isang kamag-anak. Dahil kabilang ang patay sa ibang daigdig, ang taong sinabihan niya ng nais niyang mangyari ay magkakasakit. Hindi magagamot ng medisina ang anumang sakit na dulot ng isang patay o ispiritu kaya't itong maysakit ay isasangguni sa isang *menkiyab* upang alamin kung ano ang dahilan ng kanyang karamdaman.

Kung makikilala ang mapanglaw at ulilang ispiritu, isasagawa na ang ritwal-walit para sa yumaong kamag-anak na gustong maiwi. Huhukayin at iuwi muna sa nayon ang mga labi ng namatay bago tawaging pauwi rin ang kanyang ispiritu. Sa *wawalit* o pook pangritwal isasagawa itong pagtawag sa halip na mula sa mismong lugar ng pinaglibingan. Ginagawa ito upang digaanong malayo ang lalakbayin ng tagabuhay at makarating ito sa bahay ng pasyente nang walang masamang pangitain.

Kapag maayos na naisagawa ang lahat ng gawain ng ritwal ay agad-agad na gagaling ang maysakit na kinausap ng namatay.

Kakatwa at kataka-taka, di kapani-paniwala pero di-maiwasang gawin ang ritwal-walit na ito dahil napapatunayan itong napakabisa kahit ngayong panahon ng papaunlad na agham at teknolohiya.

(Personal conversation with Mr. Daay Aayo and Mr. Joseph "Bagawas" Yattoy.)

CET Faculty Joins Southeast Asian Conference Abroad

David Fomeg-as, an instructor of the College of Engineering and Technology—Mountain Province State Polytechnic College, attended the 16th Association of Southeast Asian Nations Council of Japan Alumni (ASCOJA) conference in Singapore on September 8-10, 2005.

He was with fellow alumni Dr. Crispin Ramos and Angeline Marino of the Philippine Association of Japanese Ministry of Education Scholars (PHILAJAMES)—Northern Luzon chapter. Together with other

(continue to page 5)

Philippine delegation to the 16th ASCOJA conference in Singapore on September 8-10, 2005. (Photo courtesy of PHILFEJA)



Research Abstracts

PERCEPTIONS OF MPSPC FACULTY TOWARD RESEARCH¹

David Y. Fomegas²

KEY WORDS: perception, faculty, research, research method, unstructured observation, sample size, margin of error, statistical analysis, statistical difference, level of significance

ABSTRACT

The study was done generally to determine the perceptions of MPSPC faculty toward research and in the process find out the factor(s) behind the low involvement of faculty in research. Results of the study revealed that faculty members of the Polytechnic are (more than) knowledgeable enough to be able to do research. However, lack of time remains a constraint hindering most or majority of the faculty from doing research. Some of the faculty members believe the Polytechnic should not engage in research, yet majority of them agree that the college should. Most of the faculty members of MPSPC believe that the research function of the Polytechnic could be realized when both the faculty members and the college do research and put up equipped research laboratory, respectively. Members of the faculty of MPSPC are generally aware of its fourfold function, albeit there

are some who are not even aware. Length of service in MPSPC does not influence this awareness. On the other hand, highest education completed by a faculty member influences their research experience. This may also have a connection why there are more faculty members of higher academic rank and higher education who have done research.

¹ A research paper (August 2002 to March 2004) presented during the 1st Campus R & D/E Symposium: "Research, Extension, and Culture for Development", MPSPC—CET, Tadian, Mountain Province on July 19, 2005; and REDTI National Research Congress: "Streamlining the Research Agenda Across Discipline; Breaking Academic Barriers to Achieve Competitiveness in the Era of the Knowledge Society", Hotel Supreme, Baguio City on March 1-3, 2006..

² Instructor, Mountain Province State Polytechnic College—College of Engineering and Technology, Tadian, Mountain Province.
Email: dfomegas@yahoo.com

SOCIO-CULTURAL AND POLITICAL SIGNIFICANCE OF ETHNOCIDE TO COLLEGE STUDENTS OF BAGUIO CITY¹

Fomegas, David Y.²; Basco, Estrella A.³; Bay-os, Norma W.³; Dumanghi, Mary T.⁴; Dangis, Angela B.⁴; Opig, Clemencia D.⁴; Del Rosario, Rosaline B.⁴; Laban, Angelina B.⁵

KEY WORDS: ethnocide, preservation, acculturation, assimilation, exculturation, development, colonial mentality, culture, indigenous people, ethnicity

ABSTRACT

The study was done primarily to determine the socio-cultural and political significance of ethnocide to college students of Baguio City. Ethnocide is defined as the process of gradual change in ethnic culture of indigenous peoples that eventually culminates to the death of ethnicity or loss of identity as a consequence of but not limited to acculturation, assimilation, exculturation, development, colonial mentality, including geography. Results of the study indicate that ethnocide has begun with the presence of respondents having little knowledge or no knowledge of their ethnic culture and further aggravated by non- or rare practice/use of ethnic culture. However, many or majority of the respondents think that their ethnic culture should either be modified or preserved and or not to be used/practiced especially on beliefs/practices—e.g., paganism. Yet, majority of the students surveyed strongly agree on the necessity to preserve their ethnic culture for identity and solidarity. Although the major cause of ethnocide perceived by the respondents is preference of modern lifestyle, other primary causes are identified that include non-observance of the non-material components of the culture, inability to speak and non-speaking of the dialect, shameful acts of tribal folks, some ethnic practices are non-Christian, and not proud of belonging to a tribe. Thus, it is necessary to be selective which components of the ethnic culture should be preserved to mitigate/avert ethnocide. Ethnicity was also acknowledged to have much and or very much effect on the life (social and political) of students sur-

veyed, be it in the school or community. In addition, majority of the respondents strongly disapprove of some political-related ethnic practices as nepotism and paying of debt of gratitude by an elected official.

¹ A research paper (2004-2005) partially funded by the Mountain Province State Polytechnic College. Presented during the 1st Campus R & D/E Symposium: "Research, Extension, and Culture for Development", MPSPC—CET, Tadian, Mountain Province on July 19, 2005; and National Seminar-Workshop on "Building and Sustaining Learning Communities: Toward Preparing Students for Life in the 21st Century & Beyond and Research Forum on Some Areas in Education", held at the RMTU Research, Extension, and Training Center, Iba, Zambales on July 28-29, 2005.

² **Correspondence author**—to whom queries about this research should be addressed. Instructor, Mountain Province State Polytechnic College—College of Engineering and Technology.
E-mail: dfomegas@yahoo.com

³ Asst. Prof., Mountain Province State Polytechnic College—College of Engineering and Technology.

⁴ Assoc. Prof., Mountain Province State Polytechnic College—College of Engineering and Technology.

⁵ Instructor, Mountain Province State Polytechnic College—College of Engineering and Technology.

PHYTODIVERSITY UNDER PINE (*Pinus insularis*) FOREST COMMUNITY IN TADIAN, MOUNTAIN PROVINCE¹

Fomeg-as, David Y.²; Bay-os, Norma W.³; Atayoc, Jose P.⁴

KEY WORDS: biodiversity, phytodiversity, alpha (a) diversity, species diversity, ecosystem, community, geographical coordinate, type I climate, specimen, species richness

ABSTRACT

This study was done to determine and assess the alpha (a) diversity of terrestrial vascular plants belonging to classes Filicinae and Angiospermae of subphylum Pterophytina under pine (*Pinus insularis*) forest community in Tadian, Mountain Province, and to identify the various plants surveyed under each class. Only 132 species of vascular plants were registered from a 6.8725 ha pine forest giving a species richness of $1.921 \times 10^{-3}/m^2$. Based from the a diversity scale made for this study, the community has very low phytodiversity. Angiosperms form the bulk of the diversity of species surveyed with only 6.82% attributable to ferns. Dicots (74.24%), on the other hand, are more diverse than monocots (18.94%). Few of the plants were identified to the species level of the taxonomic classification while many remains to be identified even with just their local names. Unidentified plants and or specimens were assigned codes for reference.

¹ A research paper (2003-2004) presented during the Regional Sectoral/Commodity Review, ATI-CAR, BSU compd., La Trinidad, Benguet on June 15-17, 2004; 1st Campus R & D/E Symposium: "Research, Extension, and Culture for Development", MPSPC—CET, Tadian, Mountain Province on July 19, 2005; and National Seminar-Workshop on "Building and Sustaining Learning Communities: Toward Preparing Students for Life in the 21st Century & Beyond and Research Forum on Some Areas in Education", held at the RMTU Research, Extension, and Training Center, Iba, Zambales on July 28-29, 2005.

² **Correspondence author**—to whom queries about this research should be addressed. Instructor, Mountain Province State Polytechnic College—College of Engineering and Technology.
E-mail address: dfomegas@yahoo.com

³ Asst. Prof., Mountain Province State Polytechnic College—College of Engineering and Technology.

⁴ Instructor, Mountain Province State Polytechnic College—College of Engineering and Technology.

MULTI-FARM TRIAL OF BIOLOGICAL NITROGEN FIXATION (BNF) IN BEANS (*Phaseolus vulgaris*) AT MOUNTAIN PROVINCE¹

David Y. Fomeg-as²

KEY WORDS: lime, inoculum, inoculant, rhizobium, biological nitrogen fixation, dinitrogen fixation, bean's fertilizer recommendation, soil test kit, farmer's practice, nodulation

ABSTRACT

The BNF technology was extended to farmer cooperators in Egan and Amgayang, Tadian, and Ambasing, Sagada—all in Mountain Province—through demo farms with the aims of assessing the need for inoculation in their farms, determining the performance of the standard strain inoculant, and comparing the effects on nodulation and yield of beans of the assigned treatments especially the inoculant *Rhizobium leguminosarum* bv. *phaseoli* (CIAT) vis-à-vis the farmer's practice. Inoculated beans showed higher nodulation compared to the other uninoculated beans or treatments. However, only in Egan, Tadian did the inoculated beans showed a positive response to inoculation based on the ANOVA, most likely due to sparse population of local rhizobium in the soil. Yield of inoculated beans was generally lower than other practices including the farmer's practice, but were comparable based on the ANOVA or there was no significant difference found among treatment means on yield. Nodulation of beans in farmer's practice either limed or unlimed is generally lower than the other practices tested. Also, all treatments with BNF technology including the BNF technology alone as treatment are generally of higher nodulation than the rest of the treatments tested. But, all treatments with BNF technology or inoculated beans generally had lower yields than farmer's practice either limed or unlimed.

¹ A research paper (1999-2000) partially funded by the Mountain Province State Polytechnic College. Presented during the Regional Sectoral/Commodity Review, ATI-CAR, BSU compd., La Trinidad, Benguet on June 15-17, 2004; 1st Campus R & D/E Symposium: "Research, Extension, and Culture for Development", MPSPC—CET, Tadian, Mountain Province on July 19, 2005; and National Seminar-Workshop on "Building and Sustaining Learning Communities: Toward Preparing Students for Life in the 21st Century & Beyond and Research Forum on Some Areas in Education", held at the RMTU Research, Extension, and Training Center, Iba, Zambales on July 28-29, 2005. Exhibited on a poster during the 9th Philippine Society of Soil Science and Technology (PSSST) Annual Meeting and Symposium at CLSU on June 1-2, 2006.

² Instructor, Mountain Province State Polytechnic College—College of Engineering and Technology.
E-mail: dfomegas@yahoo.com.