

DEPARTMENT OF LIFE SCIENCES

Dale F. Webber, BSc (Hons.), PhD *UWI* – Head of Department

WORK OF THE DEPARTMENT



The academic year 2004/05 was perhaps the most challenging in the history of the Department of Life Sciences. This was partially due to the losses associated with hurricane Ivan but primarily due to the 16.5% reduction in budget allocation coupled with a 23% increase in student numbers, while increased inflation eroded purchasing ability and importantly staff morale. Notwithstanding, the department engaged the opportunities offered by the budget reduction and initiated modifications to its three year strategic purpose which allowed not only survival but in some areas the department experienced growth and development through greater efficiency. Much of the infrastructure repairs and improvement was made possible by grant funding, liaising with other faculty facility users and Bursary capital intervention. Adversity can bring out the latent resourcefulness.

(a) Department's performance during 2004/05

Undergraduate teaching

Goals/objectives identified

1. The introduction of new courses or modernization of existing courses to reflect and respond to the intellectual and manpower needs of the wider Jamaican and Caribbean society.
2. The increase enrolment into introductory courses and therefore majors and minors at final year.
3. The improvement of teaching and learning facilities/ methodologies and infrastructure to improve the efficiency of teaching and learning as well as improving the learning experience.

Departmental response and measure of goal achievement

1. A new course was mounted in Horticulture in 2004/05 with new courses in Coral Reef Biology and Medicinal & Economic Botany approved for delivery in 2005/06. The return of Cell Biology & Genetics as well as the modification of BL05A&B to CAPE format completed the response. Much was gained by an indication of interest in final year courses by second year students as well as an active student staff liaison committee which met twice per semester.
2. All level I and II courses in the department attracted more students in 2004/05 with one course having 54% more. While final year courses were less populated in 2004 the departmental averages showed a 23% increase in numbers. All five majors offered by the department reflected increases ranging from 4% to 19%.
3. Teaching skills were improved over the year by the departmentally facilitated Instructional Development Unit (IDU) Training Teaching Skills training session (where 15 of the 20 staff were trained and empowered). The same approach saw 16 of 20 staff being trained by MITS ISS on the OurVLE system to facilitate 'e' mode lecture delivery. Infrastructure improvements included the air conditioning of the Biology Lecture Theatre, the refurbishing of the Port Royal Marine Laboratory, the purchase of 30 insect proof herbarium cabinets and 25 Olympus microscopes as well

as repairs to the Preliminary and Introductory laboratories.

Graduate Training

Goals/ objectives identified

1. To maintain the standard and number of Masters and Doctoral research programmes presently housed within the Department. To explore and expand other research as well as taught Masters programmes especially as income generating programmes
2. To find the synthesis between research and problem solving in Jamaica and the wider Caribbean community and use that synthesis to improve relevance of the Department and provide additional funding.

Response/ measure of goal achievement

1. Core courses sat by all new graduate students were revised to improve research methods and statistics in biology. The number of MPhil registrations remained at 60 while the number of PhD's increased by 24% to eighteen. A new MSc programme in Aquatic Sciences was developed and approved in 2004/05 for implementation in 2005/06. This will increase the department's non-UGC MSc programmes to three with the original two MSc programmes in Tropical Ecosystem Assessment and Management and Plant Production and Protection being continued.
2. Implementation of Focus Groups within the department to gain critical mass in grant application, diversity in problem solving and a collegial multidisciplinary research base. Two of these focal groups, Plant Cultivation and Marine Sciences have shown signs of success while the remaining two Conservation and Terrestrial Ecology and Parasitology/ Physiology and Microbiology continue as individual research. Four graduate research projects from Jamaica and wider Caribbean community have been submitted for funding.

Staff Development

Goals/ objectives identified

1. To stimulate greater scientific productivity by academic staff in our bid to share high quality science with the Caribbean and the world.
2. To provide more opportunities for personal development in teaching, research, administration and communication.
3. To provide more opportunities for ATS staff to improve knowledge base, earning power and self actualization through courses, incentives and work ethic value.

Response/ measure of goal achievement

1. The departmental teaching timetable has been reorganized to offer each staff member larger blocks of research only periods to stimulate research productivity. The continuation of the Staff appraisal process acts as a good yearly reminder of the personal goals established and measures achievement.
2. Departmental organized OurVLE & IDU sessions as well as Focal Group development have created greater opportunities in teaching and research for some members. The assignment and performance of administrative duties within the Department and the continuation of the departmental seminars are the responses to try to improve administration and communication.
3. Eight ATS staff benefited from Department funded or facilitated courses, training seminars and certified accreditation programmes with one gaining advancement from UAWI to MONATS status post training.

Departmental outreach

Goals/ objectives identified

1. 1. To increase the quality and quantity of students applying and gaining entry to the UWI, FPAS and Department of Life Sciences. To improve the perception and understanding of the function of the UWI, FPAS and DLS by outreach projects to educational institutions.
2. 2. To become a more valued stakeholder in the future of Jamaica and the Caribbean by aggressive and irreplaceable representation on government, private and especially educational committees boards and decision making bodies.
3. 3. Identifying and establishing multiple modes of promoting the Department and the University as the premier seat of learning and knowledge sharing.

Response/ measure of goal achievement

1. 1. To improve the coordination with the community colleges delivering the Preliminary Biology across the country an outreach/ community college coordinator was appointed.

Staff members continue to facilitate and participate in University Council of Jamaica assessments, Teacher Education Joint Board evaluations, the BEd. Distance programme and visits to various high schools.

The research day activities remain an outstanding opportunity to achieve the goal of improving departmental perception by potential students from a range of educational institutions.

1. 2. The department has achieved this goal not only by the over 23 non-UWI committees and Boards on which staff members serve but by the leadership role maintained and the opportunities to influence the decisions and functioning of these non-UWI entities. Examples are: JADF, NEPA (and numerous subcommittees), JOAM, OEC, NGOs (NEST, JCDT, CDC etc).
2. 3. Departmental seminars and specially invited guests formed one mode of promoting the department. Other modes attempted were the production of two short information documentaries and DVDs on the research conducted within the department.

(b) Main targets for 2005/06 academic year

Undergraduate programme:

To engage the OurVLE as the delivery platform for courses in the department.

To maintain the high standard of teaching and student centred approach to teaching and learning.

To update all five year old courses, provide aims and learning objectives for all courses, majors and options in the department.

Graduate programme:

To maintain the strong graduate culture but shift the balance from M.Phil. to Ph.D. dominance.

To reduce the time taken for completion of a higher degree (improve throughput statistics).

To use the graduate research culture to conduct focused research to answer the questions posed in private and government sectors across Jamaica and the Caribbean.

To recruit more students into the three income generating MSc Programmes.

Research output:

To have the reorganized contact teaching hours pay dividends by recording 1.5 refereed publications per staff in 2005/06. This would mean 30 refereed publications in the 2005/06 year as compared with 17 in 2004/05.

To have 50% of departmental publications occur in international journals with impact factor 1.0

To have the department's research output (non-refereed publications) positioned to influence national and regional policy.

Income generation:

To generate \$1.5 million from the three MSc Programmes and a further 0.5 M from the 2006 summer school programme.

To secure sufficient grant funds to enable the research output as indicated.

(c) Overall teaching achievement

Overall teaching was exceptionally good within the department with all courses being successfully taught, examined, and assessed by students. The mean score for the lecturers in the 38 courses offered by the department was 4.5 with a Standard Deviation of 0.8 while the mean score for the courses themselves was only marginally lower 4.1

with a standard deviation of 1.0. External Examiner reviews suggest satisfaction in course content and delivery but indicate areas for improvement which form portions of the 2005/06 targets.

(d) Research output

The research output was still somewhat disappointing with the 20 staff securing only 14 publications in refereed journals and a further 6 in government reports and technical papers with 26 presentations. This resulted in a 2.3 per capita publication value. However indications are that the 2005/06 year will be a more successful publication year with 7 papers already accepted or in press as of July 2005

PAPERS PRESENTED

Proceedings of the 7th Biennial Conference of the Faculty Pure and Applied Sciences, University of the West Indies, Mona, Jamaica. May 126 -19, 2005.

- . • Bennett, K-A. and **Hyslop, E.** 2005. "A molecular and morphological study of *Gambusia* spp. in certain Jamaican rivers". Abstract pp 44 -45
- . • Curtis, M. and **Hyslop E.** 2005. "Species composition and dietary habits of fish species from Kingston Harbour Jamaica".
- . • Fisher, L., **Tennant, P.** and McLaughlin, W. 2005. "Detection and differentiation of *Citrus tristeza virus* (CTV) in Jamaica using ELISA, RT-PCR, DNA hybridisation and RFLP".
- . • Henry S, Thompson G, Waugh, C, **Robinson RD** 2005. "Chasing slugs and racing snails: preliminary studies of the role of mollusks and the mode of transmission of zoonotic *Angiostrongylus cantonensis* infection in Jamaica". Abstract pp. 66 -67. ISBN 976 41 0202 6.
- . • Lannigan, A. and **Hyslop, E.** 2005. "The community composition and distribution of the aquatic and semiaquatic Hemiptera of Jamaica".
- . • McCubbin, E. and **Hyslop, E.** 2005. "Leaf litter preferences of freshwater benthic macroinvertebrates: bamboo leaves versus dicotyledon leaves". abstract pp. 47 -48

- . • McKenzie, F. and **Tennant, P.** 2005. Development of a regeneration and transformation system for West Indian Sea island cotton (*Gossypium barbadense* L. cv. V135)".
 - . • Powell, M., Wheatley, A.O., Williams, N., Omoruyi, F., Asemota, H.N., and **Tennant, P.** 2005. "Safety assessment of transgenic papaya (*Carica papaya* L.) in rat models: Histopathology Studies".
 - . • Wright, A, Robinson D. and **Hyslop, E.** 2005. "The sublethal effects of endosulphan on *Gambusia puncticulata*". Abstract pp. 63 -64
 - . • Waugh CA, Lindo JF, Ashley D, Eberhard ML & **Robinson RD.** 2005. "*Angiostrongylus cantonensis* (Nematoda: Metastrongylidae) infections in rats and molluscs in Jamaica". American Society of Tropical Medicine & Hygiene, Miami Beach, FL, USA.
 - . • Wright, A, Robinson D. and **Hyslop, E.** 2005. "The sublethal effects of endosulphan on *Gambusia puncticulata*". Abstract pp. 63 -64
 - . • Bennett, S., **Tennant, P** and McLaughlin, P. 2005.
- “
- Identification of citrus viroids in Jamaica by RT-PCR and SSCP". Sixteenth Annual Conference of the Jamaican Society for Agricultural Sciences (JSAS). Kingston, Jamaica June 15 -16, 2005
- . • **Cohen, J.** 2004. "Trends in Herbicide Use in Jamaica". Workshop: Weed Ecology and Implications for Management. Pennsylvania State University, Department of Life Sciences, CARDI & IPM-CRSP. 9 & 10 November, 2004, Department of Life Sciences, UWI Mona Campus.
 - . • Daley, L.P., D. Lewis, **B.S. Wilson, P. Vogel,** and **R.D. Robinson** 2004. "Comparison of the enteric helminth fauna of two populations of Small Indian Mongoose in Jamaica". The Nature of the Islands; a conference on Caribbean natural history in memory of Peter R. Bacon. University of the West Indies, St. Augustine, Trinidad and Tobago, 15 -18 August 2004.
 - . • Fisher, L., **Tennant, P.** and McLaughlin, W. 2005. "Distribution and molecular characterization of *Citrus tristeza virus* (CTV) in Jamaica". Sixteenth Annual Conference of the Jamaican Society for Agricultural Sciences (JSAS). Kingston, Jamaica, June 15 -16, 2005
 - . • Fletcher S, Lopez V, Lorenzo-Morales J, Lindo JF & **Robinson RD** 2004. "Studies of the intestinal helminths in dogs in the Kingston Metropolitan Area, Jamaica, with special emphasis on *Ancylostoma* sp". 23rd Third Biennial Caribbean Veterinary Medical Association Conference. 8th-11th November 2004, Port-of-Spain, Trinidad.
 - . • Logan, T. and **D. Robinson** "Impact of Intercropping with String Beans, Peanuts and Red Peas on the Growth Rate and Yield of Cabbages" The SRC 18th Annual Conference on Science and Technology. Nov. 23 -25, 2004. 5 pp.
 - . • Murray, A.O. & **K.A. Aiken.** "Artisanal fisheries in Jamaica: an examination of a large fish landing site at Whitehouse, Westmoreland". Presented at 57th Annual Meeting of Gulf & Carib. Fish. Instit., St. Petersburg, Florida, Nov. 2004
 - . • Reid, N. & **Cohen J.** 2004.. "Solarization and Mulching as Weed Management Tools in Organic Agriculture. Seminar: The Promotion of Organic Farming in Jamaica". Jamaica Organic Agriculture Movement with Canadian International Development Agency. August 26, 2004, Kingston.
 - . • **Robinson, R.D.,** Cecelia Waugh, John Lindo, Karen Bishop and Mark Eberhard 2004. "*Angiostrongylus cantonensis* (Nematoda: Metastrongyloidae) infection: an emerging zoonosis". The Nature of the Islands, a conference on Caribbean natural history in memory of Peter R. Bacon. University of the West Indies, St. Augustine, Trinidad and Tobago, 15 -18 August 2004.
 - . • **Robinson, R. D.** 2004. "The GM debate must not neglect developing countries". 2nd International Workshop of the Latin American and Caribbean Bioethics Network. Havana, Cuba (September2-3, 2004).
 - . • Turner, S. G. and **Tennant, P.** 2005. "Differential reactions to *Papaya ringspot virus* of progenies obtained from crossing tolerant papaya cultivars". Sixteenth Annual Conference of

the Jamaican Society for Agricultural Sciences (JSAS). Kingston, Jamaica June 15 -16, 2005

- . • Van Veen, R., and **B. Wilson**. 2004. "Taxon report for the Jamaican Iguana". Report at annual meeting of the IUCN SSC Iguana Specialist Group, Suva, Fiji
- . • Waugh CA, Lindo JF, Foranda P, Angeles-Santana M, Lorenzo-Morales J & **Robinson RD** 2005. "Study of the helminth parasite of wild rats (*Rattus* spp.) in Jamaica, citing their zoonotic potential". Abstract pp. 66 -67. ISBN 976 41 0202 6.
- . • **Webber, D.F** and **Webber, M.K.** 2005. "The planktonic community associated with the Conch industry of the Pedro Bank, south of Jamaica". Jamaica Institute of Environmental Professionals 2nd National Conference. June 2005.
- . • **Wilson, B. S.** 2004. "Conservation of reptile diversity in a Jamaican forest: experimental removal of the introduced Indian mongoose". The Nature of the Islands: a conference on Caribbean natural history in memory of Peter R. Bacon. University of the West Indies, St. Augustine, Trinidad and Tobago, 15 -18 August 2004.

PUBLICATIONS

Books and Monographs

- * Warner G.F. and **I. M. Goodbody**, "Jamaica". Chapter 1.4 in Caribbean Marine Biodiversity: The Known and the Unknown ed. by P. Miloslavich. Lancaster PA DEStech Publications Inc., 2005. pp. 57 -71.

Refereed Journal Articles

- .* **Goodbody, I. M** "Diversity and distribution of Ascidians (Tunicata) at Twin Cays, Belize". *Atoll Research Bulletin* . (2004): no. 524,1-23.
- .* **Goodbody, I.M.** "Port Royal as a focal point for marine biodiversity in Jamaica". *Jamaica Journ. Sci. & Tech.* Vol. 15 (2004): pp. 37 -53.
- .* Ellis-Tabanor, M. and **Hyslop, E.** 2005. Effect of sublethal concentrations of endosulfan on growth and fecundity of two species of snails. *Bull. Environ. Contam. Toxicol.* 74: 1173 1178.
- .* Levette PN, Douglas KA, Waugh CA, **Robinson RD** & Lindo JF (2004). Failure to detect *Angiostrongylus* in Barbados. *West Indian Medical Journal* 53:58.
- .* **Mendes, J.** (2004) Timing of skeletal band formation in *Montastraea annularis*: Relationship to environmental and endogenous factors. *Bull Mar Sci.* 75(3): 423 -437.
- .* Mitchell, S. F., T. Stemman, D. Blissett, I. Brown, W. O'Brian Ebanks, G. Gunter, D. J. Miller, A. Pearson, **B. Wilson**, and W. A. Young. 2004. Late Maastrichtian rudist and coral assemblages from the Central Inlier, Jamaica – towards an event stratigraphy for shallow-water Caribbean limestones. *Cretaceous Research* 25: 499 -507.
- .* Rutzler, K, C. Diaz, I. C. Feller, **I. M. Goodbody** and I. G. Macintyre. "The Aquatic environment of Twin Cays, Belize". *Atoll Research Bulletin* . (2004): no. 512,1-49.
- .* **Tennant, P.**, Ahmad, M. H., and Gonsalves, D. 2005. Field resistance of coat protein transgenic papaya to Papaya ringspot virus in Jamaica. *Plant Disease* 89: 841 -847
- .* **Tennant, P.**, Souza, M., Gonsalves, D., Fitch, M., and Slightom, J. 2005. Line 63-1, a new virus-resistant transgenic papaya for Hawaii. *HortScience* 40: 1196 -1199.
- .* **Webber, M.K.**; Edwards-Myers, E.; Campbell, C and **Webber, D.F.** -2005. Phytoplankton and Zooplankton as indicators of water quality in Discovery Bay, Jamaica. *Hydrobiologia*. Vol. 545: pp 177 -193.
- .* Williams, J., A., Fagan, H. J. and **Coates-Beckford, P. L.** 2004. Aspects of banana cultivation and root health in the Windward Islands. *Tropical Agriculture* (Trinidad) Vol. 8 (2) 1-8.

- .* **Wilson, B. S.**, and D. Cooke. 2004. Latitudinal variation in rates of overwinter mortality in the lizard *Uta stansburiana*. *Ecology* 85: 3406 -3417.
- .* **Wilson, B.S.**, O. F. Robinson, and **P. Vogel**. 2004. Status of the Jamaican Iguana (*Cyclura collei*): assessing 15 years of conservation effort. *IGUANA* 11: 224 -231.

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Technical reports and Non-refereed Articles

- .* Reid, N. and **Cohen, J.E.** Integrated Pest Management Collaborative Research Support Programme (IPM CRSP) Year 11 Report (Overview of the Caribbean Site, page 4), August 31, 2004.
- .* Reid, N. and **Cohen, J.E.** CARDI Jamaica Quarterly Reports, September 2004 to March 2005.
- .* **Webber, M.K.** Information sheet on Ramsar wetlands: National Environment and Planning Agency. Pp 47.
- .* **Wilson B. S.** Contributing scientist Global Amphibian Assessment for the New World. Global Amphibian Assessment (GAA) – IUCN, Conservation International, and NatureServe.

INCOME GENERATION

Income from large grants

International Foundation for Science – “The Regenerative and Restorative Ecology of a Wet and a Moist Forest over Limestone in Jamaica”.

Date of funds approval: 04/11/04

Funds allocated: US\$12,000.00

Dr Kurt McLaren, Lecturer

Rufford Foundation small grant– “The floristics and structure of two forests over limestone in Jamaica”.

Date of funds approval: 04/08/04

Funds allocated: £5,000

Dr Kurt McLaren, Lecturer

Environmental Foundation of Jamaica – “The Structure, Regeneration Ecology and Amphibian Fauna of Jamaica’s Remaining Limestone Forests”.

Date of funds approval: 03/02/05

Funds allocated: J\$5,909,616.00

Dr Kurt McLaren and Dr. Byron Wilson, Lecturer

Environmental Foundation of Jamaica – “Dolphin Interference with Fish Traps Study”.

Date of funds approval: 30/08/04

Funds allocated: J\$1,374,020.00

Dr Karl Aiken, Lecturer

Environmental Foundation of Jamaica – “Queen Conch Survey 2002”.

Date of funds approval: 02/08/04

Funds allocated: J\$2,573,890.00

Dr Karl Aiken, Lecturer

European Union -ECOST project is to develop a new approach for the evaluation of fishing activities and fishing policies in order to contribute to a better management of aquatic resources in the world.

Date funds approved: 13/07/05

Funds allocated: J\$11,400,000.00

Dr Karl Aiken, Lecturer

Environmental Foundation of Jamaica – “Hydrodynamic and Water Quality Modeling of the Southeast Hellshire Coast of St Catherine, Jamaica”.

Date of funds approval: 11/01/05

Funds allocated: J\$1,060,000.00

Dr Dale Webber, Senior Lecturer & Head

Environmental Foundation of Jamaica – “Digitizing Jamaica’s National Heritage of Plant Biodiversity Collections”.

Date funds approved: 21/02/05

Funds allocated: J\$4,646,379.00

Dr Dale Webber, Senior Lecturer & Head

Jamaica Bauxite Institute – “Vegetation growth on bauxite red mud ponds for return to agricultural activity”.

Date funds approved: 13/06/05

Funds allocated: J\$568,800

Dr Dale Webber, Senior Lecturer & Head

Environmental Foundation of Jamaica – “The Crocodiles at the Fringe of Human Settlement”.

Date funds approved: 27/07/05

Funds allocated: J\$2,589,000.00

Dr Peter Vogel, Senior Lecturer

Total income from large research grants Ja\$31,425,705.00

Income from small grants Dr. Byron Wilson

2004 Audubon Zoo (New Orleans); for predator control study (\$1500U.S.) 2004 International Iguana Foundation (\$6500U.S.; with P. Vogel) 2004 Houston Zoo Naturally Wild Conservation Program (\$2500U.S.) 2004 Miami Metrozoo; for predator control study (\$2500U.S.) 2004 International Iguana Foundation (\$2500U.S. – matching funds for Miami Metrozoo grant) 2004 International Iguana Society (\$2000 – donations made to new Jamaican Iguana web site) 2004-2005 Additional “emergency” funds obtained from the IIF to continue iguana work (~\$5000U.S.)

Dr. Jane Cohen

2005 Graduate Studies and Research Fund (\$69,195.00)

Total Small grants Ja\$1,464,195.00

INCOME FROM SELF-FINANCED PROGRAMMES Programmes Income Expenditure

Excess available

MSc PPP Ja\$1,003,563.00 MSc TEAM Ja\$2,220,000.00 Summer school Ja\$1,400,629.00

Ja\$ 405,000.00 \$ 599,375.00 Ja\$ 943,548.00 \$1,276,451.00 Ja\$ 864,218.88 \$ 536,410.12

PUBLIC SERVICE Dr KA Aiken

- ☐ .– Member, Board of Directors Caribbean Maritime Institute
- ☐ .– Member, Select Committee on Economy & Production, Gordon House, Kingston.
- ☐ .– Member, Board of Directors, Jamaica Conservation & Development Trust
- ☐ .– Member, Board of Directors, Caribbean Coastal Area Management (CCAM) Foundation
- ☐ .– Member, Scientific Authority, Convention and International Trade in Endangered Species of Flora & Fauna (CITES), Jamaica

Mr. Frederick Boyd

- External Examiner, Joint Board of Teacher Education (JBTE) in the Institute of Education.

Dr. Jane Cohen

- ☐ .– Member, of Alien Invasive Species Working Group (NEPA administered).
- ☐ .– Advisor, (in weed control and plant nutrient analyses), Banana Board Research Member, of Jamaican Society for Agricultural Sciences.
- ☐ .– Member, Education & Research Sub-Committee of the Nature Preservation Foundation

Professor Ivan Goodbody

- .— Member, Editorial Board of Bulletin of Marine Science.
- .— Member, Editorial Board of Caribbean Marine Studies.

Dr. Kurt McLaren

- Member: The Blue and John Crow Mountains National Park Scientific and Technical Advisory Committee

Prof. Ralph Robinson

- .— Member, Board of Directors, Jamaica Agricultural Development Foundation
- .— Member, National *Ad hoc* Committee to Develop Guidelines for the Aquaculture Industry in Jamaica
- .— Member, Shrimp Aquaculture Policy Sub-Committee

Dr. Kisan Vaidya

- .— Member, Gene Bank Committee, Jamaica.
- .— Member, Technical Committee, Jamaica Development Foundation (JADF)

Dr Peter Vogel

- .— Member, of Board, Scientific Authority
- .— Member, Jamaican Iguana Research and Group

Agricultural

Conservation

- .— Member, Alien Invasive Species Working Group
- .— Member, IUCN West Indian Iguana Specialist Group
- .— Member, Executive Committee and Past President, Bird Life Jamaica
- .— Member, of Scientific Advisory Committee, Blue and John Crow Mountains National Park
- .— Member, Advisory Board, Natural History Division, Institute of Jamaica
- .— Member, Society of Caribbean Ornithology

Dr. Dale Webber

- .— Secretary, National Environment Societies Trust (NEST)
- .— Chairman, CL Environmental Company Limited.
- .— Member, Ministry of Education and Culture Overseas Examination Board.
- .— Chairman, National committee of RAMSAR international convention on Wetlands.
- .— Member, Science and Technology Advisory Committee of the National Commission for UNESCO.
- .— External examiner, CASE Environmental Sciences programme.

Dr. Mona Webber

- .— Member, National Environmental Education Committee.

- .— Member, Steering Committee for Sea Turtle Recovery Network
- .— Member, Association of Marine Laboratories of the Caribbean.
- .— Member, Caribbean Academy of Sciences, Jamaican Chapter.
- .— Member, National Ramsar committee (NEPA).
- .— Member, UNESCO National Advisory Committee for Science and Technology

Dr. Byron Wilson

- .— Member, Iguana Specialist Group (IUCN)
 - .— Head, Jamaican Iguana Research and Conservation Group
 - .— Technical Expert, Global Amphibian Assessment (GAA)
- Member, Board of Directors, Windsor Research Centre.

CATEGORIES OF STUDENTS

Undergraduate numbers:

Preliminary (Year 0) – 175, Introductory (Level I) – 215, Advanced (Level II) – 81 and Advanced (Level III) – 45. Of the 45 final year students, 41 completed graduation requirements with the following distribution in performance. First class Honours – 7, Upper second Honours – 22, Lower second Honours – 12 and pass – 0.

The majors selected and completed within the Department were: Botany–2, Biology with Education–2, Environmental Biology–11, Experimental Biology – 4, Microbiology – 8 and Zoology – 14.

Postgraduate	2004/05 registrations	2004/05 completions
MSc Tropical Ecosystem Assessment and Management	21	–
MSc Plant production and protection	9	–
MPhil	60	9
PhD	18	3

Prizes

The following students were formally recognized for quality academic performance. Preliminary Biology **Talisha Baker** Introductory Biology

Kayann Nelson & David Keene Level II Zoology **Sean C. Swaby**

L.B. Coke Plant Physiology Prize **Lucine M. Edwards & Andre Bowers**

Vincent McKie Zoology Prize **Ivana Kenny**

Principal's Research Day Awards Dr. Mona Webber for Project attracting most research funds

Dr. Mona Webber & Dale Webber for best publication, Faculty of

Pure and Applied Sciences.

/th Biennial Conference of the Faculty of Pure and Applied Sciences,
The University of the West Indies, Jamaica.

Best oral presentation by a graduate student: **Suzette Fletcher**

Best poster presentation by a graduate student: **Cecelia Waugh**