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DARWIN INITIATIVE

APPLICATION FOR DARWIN FELLOWSHIP PROGRAMME 2007

Please read the Guidance Notes before completing this form. Give a full answer to each section; applications will be considered on the basis of information submitted on this form. Please note the additional information requirements (CVs and letters of support as detailed in the Guidance for Applicants). Whilst this form is to be submitted by the host institution the proposed Fellow should be fully involved in development of the proposal. Please keep to word limits as specified and do not use a font size smaller than Arial 11pt for main text, Arial 10pt for financials.

Submit by Friday 16 March 2007

1. Contact Details

<i>Ref. (Defra/ECTF only):</i>
Name and address of UK applicant organisation (results will be sent to the postal address provided here) Anton Immink Institute of Aquaculture University of Stirling Stirling. FK9 4LA

2. Darwin Fellow. A one page CV must be enclosed.

Name and official address of proposed Darwin Fellow Chudamani Pandey Institute of Agriculture and Animal Science Lamjung Campus Nepal
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3. Summary of proposed Fellowship (no more than 100 words)

The fellow will undertake postgraduate study in sustainable development at the University of Stirling. This training details practical, balanced approaches to natural resource management and economic and social development, whilst providing insight into the international policy process driving key decisions on a global and local scale. A short placement at the Wildfowl and Wetlands Trust will enable the fellow to learn first-hand issues of wetland conservation. Supervised research thesis work at Koshi Tappu Wetland Reserve in Nepal will ensure relevance to the home country context. The fellow will return to Nepal able to actively contribute to sustainable development education.
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4. Principals in Project. Please give the details of the individuals from the UK host organisations (and other institutions if relevant) who would be directly involved in supervising/working with the Darwin Fellow. A 1 page CV on each must be enclosed.

Details	Main UK expert	Other UK expert	Other UK expert	Other UK expert
Surname	Immink	Buckton	Little	
Forename(s)	Anton	Seb	Dave	
Post held	Research Fellow	Community Wetlands Programme Manager	Senior Lecturer	
Institution (if different to above)		WWT, Slimbridge, Glos, GL2 7BT		
Department		Wetland Conservation		
Telephone				
Fax				
Email				

5. Describe briefly the aims, activities and achievements of the UK applicant organisation. (Large institutions please note that this should describe your unit or department) (150 words)

The Institute of Aquaculture is the largest postgraduate training facility of its kind in the world. It has an international reputation for producing high quality research and effective graduates. In conjunction with other technical and social science departments at the University of Stirling and key contacts from government and industry, the Institute of Aquaculture offers dynamic postgraduate training in sustainable development. In excess of 1000 former students now contribute directly to the sustainable development of aquatic resources, both through production management and policy. Around 25% of these students work in developing countries and the courses are designed to enable access to these students, with the Institute currently pioneering distance learning programmes in aquatic resource development in Asia and Africa. Over the last 15 years the Institute has further contributed to sustainable development through the management of the DFID aquaculture research programme.

6. Describe briefly the aims, activities and achievements of the proposed Darwin Fellow's organisation. (Large institutions please note that this should describe your unit or department) (150 words)

The Institute of Agriculture and Animal Science (IAAS) at Tribhuvan University designs and implements educational programmes balancing established and emerging needs in the agricultural sector of Nepal. It aims to bring excellence in instruction, research and technology dissemination, and to encourage research catering to the needs of people engaged in the agriculture sector. The Institute started postgraduate degree programmes in 1998 to fulfil the need for qualified manpower for the country. This is sole agricultural institute in Nepal and produces more than 100 bachelors in Agriculture and more than 30 bachelors in veterinary annually. The Institute has started doctoral programs in three disciplines. Demand for agricultural graduates is very high in the country and this Institute plays a leading role in producing the qualified manpower to support sustainable agricultural development. The Institute also has a remit for wider research and extension activities, contributing directly to the sustainable development of Nepal.

7. Describe briefly the proposed Fellow's current role within their organisation and link to a Darwin project. (150)

The proposed Fellow is currently a lecturer at IAAS. He is delivering courses in fisheries and aquaculture at both undergraduate and postgraduate levels. He is also involved in farmer training and action research activities conducted by the Aquaculture Department of the Institute.

IAAS is a partner in the current Darwin project 'Managing wetlands for sustainable livelihoods at Koshi Tappu, Nepal' providing on-the-ground guidance for the fisheries elements of the project. IAAS is also involved directly with surveys, planning and training, with the Institute of Aquaculture providing technical backstopping. The proposed Fellow has been centrally involved in the surveys conducted at Koshi Tappu to date and his future involvement will be strengthened both within and following the Fellowship.

8. Provide a concept note on the Darwin Fellowship. This should include:

- a clear outline of the aim and objectives of the Fellowship
- the programme of work, including key milestones through the duration of the Fellowship and their timing
- the role of the UK applicant organisation, and others where relevant (including contacts)
- where appropriate, how the Fellowship will contribute towards sustainable development or sustainable livelihoods

Maximum 800 words

The Fellowship aims to train a key member of staff from IAAS in order to enable them to improve their long term teaching and training programmes for the future managers of natural resources in Nepal. Crucially, the Fellowship will significantly strengthen the postgraduate teaching at IAAS. Their involvement in the current Darwin project at Koshi Tappu will be enhanced through a supervised research project conducted in the wetland reserve that will contribute to both their direct learning and the outcomes of the main project. This will contribute to the wider education of future actors in the sustainable management of wetland resources in Nepal to ensure productive benefits can be secured alongside environmental protection and social development. The Fellowship will not only provide wide-ranging interdisciplinary training, but the postgraduate programmes in Sustainable Development at Stirling also contain specific modules covering transferable skills including policy influencing approaches and outreach field skills.

The programme of work will be dictated by the format of the postgraduate courses in sustainable development run at the University of Stirling. The course will start on 10th September 2007 with a series of foundation modules that will finish in December 2007 with an examination. Successful completion of this foundation course will provide the fellow with a Postgraduate Certificate. Successful completion of the advanced modules, that run from January 2008 until 31st May 2008 will provide the fellow with a Postgraduate Diploma. The thesis project, with fieldwork to be conducted in Nepal between 1st June and 31st July, will be completed by 31st August 2008 and qualify the successful Fellow for an M.Sc. in Sustainable Development. Following a period of field work in Nepal for this thesis, the student will return to Stirling to write up the research and face examination.

During the Fellow's period of study at Koshi Tappu the Stirling partner (Anton Immink) in the main Darwin project will visit for two weeks to supervise thesis work. This will further contribute to the main project by providing an additional input. The exact topic of study will be agreed by May 2008 between supervisors at Stirling, the fellow and all other partners in the Darwin project at Koshi Tappu, in-line with progress in the main project. It is expected that the research will cover an aspect of improved fisheries production, perhaps addressing connection with public promotion and alternative income generating and livelihood strategies.

The fellow will be provided with an academic supervisor (Dr Dave Little) for the period of study at Stirling and have access to all the necessary facilities at the University of Stirling, including international student support services and the library. The inclusion of the Wildfowl and Wetlands Trust as a placement partner in this Fellowship will strengthen the experience of the Fellow in the specific issues of wetland conservation, drawing upon international expertise at the WWT headquarters in Slimbridge. As WWT is the lead organisation in the wider Darwin project at Koshi Tappu, the Fellow's placement will further strengthen collaboration in that project. The experience of WWT in public information, not just in the UK but in visitor centres around the world, will provide firsthand knowledge to the Fellow that they can utilise both in their teaching, but also in extension projects back in Nepal.

Because the project thesis work will take place in Nepal, the Fellow will start directly contributing to livelihood improvements during the Fellowship. His work, and involvement in the wider Darwin project, will mean that the learning from his Fellowship will continue to have impact within the current project. The Fellow's central involvement in natural resource training and education in Nepal will also ensure that the learning from this Fellowship is taken forward into the wider sustainable development of the country. The Fellow undertakes to revise all lecture material and outreach approaches to include new learning from the Fellowship within a year of returning to post.

9. Legacy. Provide information on how the Darwin Fellow will utilise, promote and disseminate the benefits of the Fellowship on return to his/her home country. Will a strategy be developed during the Fellowship to ensure this is achieved? (200 words)

The proposed Fellow is a lecturer at IAAS, Tribhuvan University and will utilise the skills and knowledge gained during his Fellowship to improve lecture materials, course structure, wider course content and student thesis projects to cover issues of sustainable development in more detail. The Fellow will use the transferable skills developed during the Fellowship to support the IAAS remit for outreach by improving extension approaches utilised by staff and taught to students. IAAS has a policy that those sent on external training share the knowledge gained with other staff on their return.

The learning gained by the Fellow will be compounded through other activities conducted under an EU-funded education strengthening project between the Asian Institute of Technology in Bangkok, IAAS and the University of Stirling, that cannot fund Fellowships. Dr Dave Little is the main Stirling contact on this project and works closely with the Nepal partners. As both the Darwin-funded project and the EU-funded project continue beyond the end of the Fellowship the direct linkage will be maintained to facilitate and validate the improvements in teaching and outreach.

10. How will the Fellowship assist the Fellow's organisation and/or local communities and/or home country in working towards the objectives (or implementation) of the Convention on Biological Diversity? References to the Convention should be specific, for example, by referring to articles, cross-cutting or thematic issues¹. (200 words)

Nepalese National CBD reports recognise that wetlands have received less attention than other ecosystems, despite their rich biodiversity and critical contribution to the livelihood and life support systems of Nepalese people. Unsustainable exploitation of resources and loss and degradation of habitat are the main threats to wetlands in Nepal. Root causes include inadequate capacity and awareness of wetland biodiversity conservation, and high local community dependence on wetland resources but low involvement in their management. The knowledge and skill gained from the training will enable the wide dissemination of information on techniques of wetland management for sustainable livelihoods throughout the country. Through contributing to the wider education of future actors in the sustainable management of wetland resources, ensuring productive benefits can be secured alongside environmental protection and social development, the fellowship will contribute to Nepal's implementation of Articles 8 (In-situ Conservation), 10 (Sustainable Use of Components), 12 (Research and Training), 13 (Public Education and Awareness) and 17 (Exchange of Information) of the CBD. Activities under the Koshi Tappu project involve particular emphasis on Alien Species (15%), Biodiversity and Tourism (15%), Public Education and Awareness (40%), Sustainable Use and Biodiversity (20%) and Traditional Knowledge Innovations and Practices (10%) themes of the CBD.

11. What collaboration has there been with the Darwin Fellow to date in developing the proposal, and what collaboration is planned for the duration of the Fellowship? Where relevant, describe any consultation or collaboration by the proposed Fellow within his/her own country. (200 words)

The Fellow has been involved in deciding which M.Sc. could most effectively contribute to the future needs of himself, IAAS and Nepal more widely. The Fellow had initial inputs into outlining the benefits of this training, both for themselves, but also for their institution and the country more widely.

During the Fellowship the Fellow will explore opportunities for joint projects in the future between IAAS and the University of Stirling and WWT. On-going collaboration between all three partners as part of the current Darwin project at Koshi Tappu provides a framework and focus for continued collaboration, particularly as the research thesis work will be based there and will contribute to the wider project. IAAS and Stirling will also continue specific partnership with the Asian Institute of Technology (AIT) through the EU-funded higher education link project. A member of IAAS staff is based at AIT and was a former student of the potential academic supervisor for this Fellow when he was based at AIT over 10 years ago. The collaboration has been strong and enduring and continues to focus on the sustainable development of aquatic resources in Nepal through direct intervention and long term training.

¹ Refer to the Guidance Notes for Applicants for further information

12. Provide details of the Darwin Initiative project (including the reference number) that the proposed Fellow was associated with, including his/her role in that project and any ongoing involvement. (200 words)

The purpose of Darwin Initiative Project 'Managing Wetlands for Sustainable Livelihoods at Koshi Tappu Nepal' (Ref: 15/014) is to assist local communities around Koshi Tappu Wildlife Reserve in managing buffer zone wetlands for sustainable livelihoods, whilst enhancing wetland biodiversity. A participatory wetland economic valuation and learning needs analysis will identify barriers to local natural resource users obtaining sustainable livelihoods from buffer zone wetlands. Informed by a combination of participatory biodiversity and other ecological surveys, fisheries, invasive species and water quality and quantity surveys, these barriers will be overcome through production of the following project outputs: 1) Trained personnel and built capacity in local organisations and community groups 2) Guidelines for wetland management for sustainable livelihoods 3) A sustainable fisheries management plan 4) The Darwin Centre for Wetland Management for Sustainable Livelihoods. The proposed Fellow has been involved in the initial fisheries surveys. The effectiveness of future involvement will be enhanced through greater appreciation of interdisciplinarity following the Fellowship training.

13. Duration of the Fellowship: what are the intended start and finish dates?

12 months from 1st September 2007 to 31st August 2008

14. Where will the Darwin Fellow be based? Please be specific with organisational details and dates (where more than one location). (200 words)

For the majority of the Fellowship the Fellow will be based at the University of Stirling in Scotland. Specifically from 1st September 2007 until 31st May 2008 the Fellow will be in Stirling, except for a two week period in February 2008 when they will be based at WWT headquarters in Slimbridge. From 1st June 2008 to 31st July the Fellow will be back in Nepal at Koshi Tappu Wetland Reserve. Returning to Stirling 1st – 31st August to complete writing up, submit and face final assessment. The final departure date from UK is expected to be 31st August 2008.

15. Financial Aspects. Please use UK Government Financial Years ie April 2007 – March 2008 etc)

Fellow payment				
	07/08	08/09	2007/08	2008/09
London: £1200/month	Number of months		£	£
UK (outside London): £1000/month	Number of months	7	3	£
Overseas location £300 estimated actuals/month*	Number of months	0	2	£
Host Organisations' costs				
	07/08	08/09	2007/08	2008/09
UK: £300/month	Number of months		£	£
Overseas location:	Number of months	0.5		£
A. Total Fellow & Host Organisation Costs			£	£

Actual travel costs (Return journey to

* Figures available from Margaret Okot on 0207 082 8430

Fellowship location)		
	2007/08	2008/09
Return airfare. <i>Details</i> Kathmandu-United Arab Emirates-Edinburgh (return)	£	£
Travel to/from airports. <i>Details</i> Lamjung-Kathmandu airport (return)	£	£
Visas etc. <i>Details</i> To UK for one year (2 entries)	£	£
B. Total Fellowship Travel Costs (Actual costs up to £2000 will be paid)	£	£

Actual travel costs 'Additional Travel'		
Specify purpose. Maximum £500 within country of Fellowship location, £1500 for international travel.		
	2007/08	2008/09
Airfares <i>Details</i> Edinburgh-United Arab Emirates-Khatmandu-Biratnagar (and return)	£	£
Subsistence <i>Details (including number of days)</i> <i>International subsistence included in 'Fellow Payment' above as fellow will be away from home for research. However request made here for subsistence and travel to WWT HQ for two week placement.</i>	£	£
Travel to/from airports. <i>Details</i> Stirling-Edinburgh, Biratnagar-Koshi (and return)	£	£
Visas etc. <i>Details</i> To return to UK at the end of field work	£	£
C. Total (Other travel) costs	£	£

D. ACADEMIC FEES	2007/08	2008/09
<i>Details</i>	£	£

TOTAL FELLOWSHIP COSTS (A + B + C + D)	£	£

16. Other sources of funding: provide details and amounts

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FCO NOTIFICATION

Please check the box if you think that there are sensitivities that the Foreign and Commonwealth Office will need to be aware of should they want to publicise details of the Darwin Fellowship and the resultant work in the UK or the Darwin Fellow's home country

CERTIFICATION

I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful.

I enclose CVs for project principals and letters of support as requested in the Guidance Notes.

Name (block capitals)	Anton Immink
Position in the organisation	Research Fellow

Signed

Date:

16th March 2007

Please return completed form to The Edinburgh Centre for Tropical Forests (ECTF) by 16 March 2007 (to arrive by midnight) by email to darwin-applications@ectf-ed.org.uk. A hard copy of the full application should also be sent to ECTF, Darwin Applications Unit, Pentlands Science Park, Bush Loan, Penicuik, Edinburgh EH26 OPH and should be postmarked 16 March 2007.

Curriculum Vitae

PERSONAL DATA:

Name: Chudamani Pandey
Date of birth: September 20, 1972
Nationality: Nepalese
Mailing Address: Institute of Agriculture and Animal Science (IAAS), Nepal
E-mail Address: Chudapandey@yahoo.com

EDUCATIONAL BACKGROUND:

M.Sc.AnSc. (Aquaculture): Institute of Agriculture and Animal Science (IAAS), Nepal, 2002

B.Sc. (Agriculture): Institute of Agriculture and Animal Science (IAAS), Nepal, 1999

Thesis Title: "Productivity assessment of carp polyculture systems and tilapia culture system under farmer's field condition in Chitwan Nepal".

Training and Workshop:

July 9- 21, 2006: Participant in curriculum development workshop as an instructor. Aquaculture and Aquatic Resources Management (AARM), SERD-AIT, Thailand

26-28 Feb. 2003: Participant in International Conference on Himalayan Biodiversity (ICHB).HIRI, BRG, ECOAN & NBA. Katmandu, Nepal.

3-5 July 2002: Participant in Pond Fertilization Algal Bioassay Testing Workshop. Pond Dynamics/Aquaculture Collaborative Research Support Program ~USAID Oregon State University, Corvallis, Oregon, USA.

Employment History:

Jan.2004-Present: Lecturer, Department of Aquaculture. Institute of Agriculture and Animal Science, lamjung campus, Nepal

Nov.2002- Dec.2003: Lecturer, Aquaculture and fisheries. Himalayan College of Agricultural Sciences and Technology (HICAST), Purbanchal University. Nepal

May 2000 to November 2002: Research Assistant, "Women in Aquaculture in Nepal Project" Directorate of research (DOR), Institute of Agriculture & Animal Science Nepal

Professional Experience:

Aug. 2002- Present: Teaching Master courses, undergraduate courses, serving as advisory committee for Master student's Thesis

August 17, 2005 to Present: Department Head, Department of Aquaculture. Institute of Agriculture and Animal Science, Lamjung Campus, Lamjung.

April, 2004 to May, 2005: Worked as a Farm Manager (Aquaculture and Livestock Farm) in Institute of Agriculture and Animal Science, Lamjung Campus. Lamjung.

Publications: "Productivity of carp polyculture system under farmer's pond condition in sub-tropical Nepal" IAAS Journal (accepted for publication).

Area of Interest: Aquatic biodiversity conservation and Participatory fishery management, Sustainable development, Teaching and dissemination of gain knowledge.

Brief Curriculum Vitae - Anton Jon Immink Date of Birth: 25th September 1972 **Nationality:** British

Relevant experience includes: Demonstrated capability to work and communicate effectively in a multicultural environment and negotiate effectively at high diplomatic and academic levels: Promotion of research through targeted and mass media to partners, policy makers and the general public. This includes use of location/culture specific methods : Proven track record of research supervision both in laboratory and field contexts.

Employment History

Current Position: Communication and Development Officer
Employer: DFID Aquaculture and Fish Genetics Research Programme, Institute of Aquaculture, University of Stirling
Location: Stirling, Asia (Bangladesh, Cambodia, India, Thailand and Vietnam) and Africa (Kenya, Rwanda, South Africa, Uganda)
Dates: November 2002 - present

Responsibilities: Extension and promotion activities at the local and international level disseminating key findings of research and scaling-up significant processes, with farmers, researchers and policy makers as well as the wider public. Working with managers and staff on projects to identify areas of promotion and potential impact. Planning impact assessment procedures at the programme level. Management of the website to ensure easy access in developing countries. Editor of Aquaculture News. Assessing proposals for funding. Writing proposals for funding. Negotiating new project contracts from position of applicant and funder.

Previous Position: Project Co-ordinator
Employer: Institute of Aquaculture, University of Stirling
Location: Eastern India and Bangladesh
Dates: July 2000 - November 2002

Responsibilities: Day to day project management of DFID-funded research projects. Five months field posting in eastern India to manage the project 'Integration of aquaculture into the rain-fed farming systems of the plateau region of eastern India'. Writing the Final Technical Report. Researching the role of self-recruiting aquatic species on rural livelihoods in the same rain-fed area and flood-prone Bangladesh. Ensuring that the work in India and Bangladesh matched that in the other partner countries (Vietnam, Cambodia and Thailand) planning research, collaborating with national partners and local villagers, personnel management - including hiring and firing, budget control and successfully writing proposals for new projects.

Education

University of Stirling Currently studying part-time PhD in information delivery networks
University of Stirling (September 1995 - June 1996) MSc. Aquaculture
University of Liverpool (October 1991 – June 1994) BSc. (Hons) Marine Biology Honours 2.i.

Publications and communications

Immink A.J. (2006) *Ideas for an Aquaculture Strategy for Rwanda*: Summary of a short visit to the National University of Rwanda for identification of opportunities for future collaboration. IoA, University of Stirling. 13p.

Tipping the scales (January 2006) Hands On: Earth Report – Taking it Personally, Series 7. BBC World. Television Trust for the Environment (subject: catfish trade developments in Vietnam)

Big fish small fry (December 2004) Hands On: Earth Report – High Tide, Series 5. BBC World. Television Trust for the Environment (subject: growing small fish in rice fields in Bangladesh)

Rethinking rice and fish (November 2004). The Economist. Science section. (subject: growing small fish in rice fields)

Immink A.J. (2004) Fields of Fish: Summary report on exhibitions and drama at the Eden Project and Edinburgh Mela. DFID-AFGRP. 10p.

Immink A.J. (2003) *The Importance of Aquaculture to the World, Today and Tomorrow*. Catalogue for the sale of the Aquatic Research Institute (San Francisco) library. Wheldon and Wesley, UK. 2 pages.

Bartley, D. M., Rana, K. J. and Immink, A. J. (2002) *The use of inter-specific hybrids in aquaculture*. Reviews in Fish Biology and Fisheries 10, 325-337.

Immink A.J., Dutta G., Kumar B. and Little D. (2000) *Fry supply across West Bengal*. Aquaculture News. University of Stirling, UK. DFID pages.

Curriculum Vitae

Dr Seb Buckton

I am Community Wetlands Programme Manager in the Wetland Conservation Department of the Wildfowl & Wetland Trust's Conservation Programmes Directorate. Prior to joining WWT, I completed my PhD on Spatio-temporal patterns in the Distribution and Ecology of River Birds with the Catchment Research Group of Cardiff University in 1998. This was carried out as part of a three-year Darwin Initiative-funded project investigating patterns in biodiversity in Himalayan Hill Streams. Other project work during my employment at Cardiff included assessments of the effects of liming on upland Welsh bogs, patterns of Dipper distribution on acidified and circum-neutral Welsh streams, and factors affecting the decline in breeding Golden Plover and Dunlin populations in mid-Wales. After completing my PhD, I worked in Hong Kong for 12 months, investigating the effects of disturbance on fishpond ecology around the Mai Po / Inner Deep Bay Ramsar site. I then spent a year in Vietnam, working for BirdLife International identifying wetlands of conservation importance in the Mekong Delta. In 2000 I joined WWT, and developed a range of projects addressing wetland conservation issues in the UK and overseas. This included a Darwin-funded project to establish a wetland biodiversity monitoring scheme in eastern Africa. The focus of my work at WWT now is promoting the management of wetlands directly involving local communities to ensure sustainable and wise use.

Selected publications:

- Nasirwa, O., O'Connell, M., Buckton, S. & Dodman, T. (2006) Building capacity in waterbird and wetland monitoring in eastern Africa. In: *Waterbirds around the world*. Eds. G.C. Boere, C.A. Galbraith and D.A. Stroud. The Stationery Office, Edinburgh, UK. Pp. 889-891.
- O'Connell, M., Nasirwa, O., Jones, R., Buckton, S. & Dodman, T. (2005) *Wetland Biodiversity Monitoring Scheme Eastern Africa – Scheme Manual*. Wildfowl and Wetlands Trust.
- Buckton, S.T. & Safford, R.J. (2004) The avifauna of the Vietnamese Mekong Delta. *Bird Conservation International* 14, 279-322.
- Buckton, S.T. & Ormerod, S.J. (2002) Global patterns of diversity among the specialist birds of riverine landscapes. *Freshwater Biology* 47, 695-709.
- Buckton, S.T. (2001) Wetland conservation in the land of the Nine Dragons. *World Birdwatch* 23 (1), 16-18.
- Ormerod, S.J., Brewin, P.A., Buckton, S.T., Juttner, I. & Manel, S. (2000) Testing the Himalayan degradation hypothesis: does catchment land use affect river biota? *Verh. Internat. Verein. Limnol.* 27, 895-900.
- Manel, S., Buckton, S.T. & Ormerod, S.J. (2000) Testing large-scale hypotheses using surveys: the effects of land use on the habitats, invertebrates and birds of Himalayan rivers. *Journal of Applied Ecology* 37, 756-770.
- Buckton, S.T., Nguyen Cu, Nguyen Duc Tu & Ha Quy Quynh (1999) *Conservation of Key Wetland Sites in the Mekong Delta*. BirdLife International Vietnam Programme, Hanoi.
- Buckton, S.T. & Ormerod, S.J. (1997) Use of a new standardised habitat survey for assessing the habitat preferences and distribution of upland river birds. *Bird Study* 44, 327-337.

Current post Senior Lecturer, Institute of Aquaculture, University of Stirling

As senior lecturer within the Systems Group I have responsibility for developing and managing a wide range of research and education activities in the field of aquatic resource management in the tropics. I am the Principal Investigator of seven current research grants supported by DFID, EC and Research Councils UK. These mainly involve design, coordination and liaison of interdisciplinary teams conducting research in South and Southeast Asia. Teaching duties include lectures and workshops on the BSc and MSc Aquaculture degree courses. I am coordinator of the advanced module of the MSc in Aquaculture, Livelihoods and Aquatic Resource Management and active in development and delivery of the Sustainable Development MSc. I have also secured support for and overseen management and development of an innovative distance learning programme on Aquatic Resource Development with colleagues in the Institute and Bangladesh Agricultural University. This is funded for the first three years by the Commonwealth Scholarship Commission (CDC). I am currently principal supervisor of 7 PhD students and second supervisor to 3 PhD students. Five PhD students have recently been examined and a further student has submitted. This has involved developing links with overseas partners and EU funding of fellowships. In addition I have had responsibility for various short-term visiting researchers.

External activities

- Member of the editorial board Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources
- Member of the Standards Committee for aquaculture of the Soil Association
- Invited speaker and chair at many international conferences, expert consultations and workshops including FAO-Regional Expert consultations, CGIAR-supported consultations, and World Aquaculture Society meetings.
- Advisory board member of Aquaculture without Frontiers, an international organization promoting the benefits of aquaculture in development contexts.
- Recipient of Stirling Council Civic Award, 2004, for taking research into action: Decentralized seed production in Bangladesh
- Member of the Editorial Board for the journal Aquaculture Research 2002-2006
- Regular reviewer for Aquaculture, Aquaculture Research, Aquaculture International, Experimental Agriculture

Recent Key Publications

- Barman, B.K. and Little, D.C. 2006. **Nile tilapia (*Oreochromis niloticus*) seed production in irrigated ricefields in Northwest Bangladesh-an approach appropriate to poorer farmers?** Aquaculture 261:72-79.
- Morales E.J., Little, D.C., Immink, A., Demaine, H., Yakupitiyage, A., Amilhat, E and Lorenzen, K. 2006. Project report : **Contribution of self-recruiting species produced in farmer-managed aquatic systems in rural areas of Southeast Asia to food consumption.** Journal of Food Composition and Analysis. 759-760.
- Karapanagiotidis, I.T. Bell, M.V. Little D.C and Yakupitiyage A and Rakshit, S.K. 2006 **Polyunsaturated fatty acid content of wild and farmed tilapias: Effect of aquaculture practices and implications for human nutrition.** J.Agric. Food Chem. 54, 4304-4310
- Kabir, M.S., Wahab, M.A., M. Karim, M.C.J. Verdegem and Little, D.C., 2004. **Comparison between existing low input and high input integrated pond-dike aquaculture systems in some villages of Maktagacha, Mymensingh.** Journal Bangladesh Agricultural University 2: 103-112.
- Azim, M.E, M.M. Rahman, M.A. Wahab, T.Asaeda, D.C.Little, M.C.J.Verdegem. 2004. **Periphyton-based pond polyculture system: a bioeconomic comparison of on-farm and on-station trials.** Aquaculture 242, 381-396.
- Little, D.C. and P. Edwards, 2004. **Impact of nutrition and season on pond culture performance of mono-sex and mixed-sex Nile tilapia (*Oreochromis niloticus*).** Aquaculture 232, 279-292.
- Little, D.C.,K. Coward, R.C Bhujel, T.A.Pham, N.R.Bromage. 2003. **An investigation into the potential effects of water quality changes induced by broodfish exchange and conditioning on the reproductive performance of *Oreochromis niloticus* (L.) held in nylon hapas.** J. Aqua. Trop. 18 (3), 245 - 256.
- Little, D.C, R.C.Bhujel, and T.A. Pham . 2003 **Advanced nursing of mixed sex and monosex tilapia (*Oreochromis niloticus*) fry, and its impact on subsequent growth in fertilized ponds.** Aquaculture 221, 265-276.
- Little, D.C., Edwards, P. 2003. **Integrated Livestock-Fish Farming Systems: The Asian experience and its relevance for other Regions.** Inland Water Resources and Aquaculture Service and Animal Production Service. Food and Agriculture Organization, Rome. 177 pp.
- Edwards, P., Little, D.C. and Demaine, H. (eds.) 2002. **Rural Aquaculture.** CABI Publishing, Wallingford. 358pp.



Tribhuvan University
Institute of Agriculture & Animal Science (IAAS)
Office of the Dean
Rampur, Chitwan, Nepal

Liason Office:
P.O. Box: 984, Kirtipur, Kathmandu, Nepal

15th March 2007

Dear Dr. Anton Immink,

Ref: Support letter in favour of Chudamani Pandey for the Darwin fellow application

I would like to support the application of Chudamani Pandey, to the Darwin fellowship, who is permanent Lecturer of Institute of Agriculture and Animal Science (IAAS), Tribhuvan University. He is working at this institute since last four years.

This training will enhance his skill and knowledge in the field of Sustainable Wetland Management and will further strengthen teaching and research capacity of the institute. Mr. Pandey will get study leave to undertake the proposed training and upon the completion of study, he will have better job placement at the institute.

Yours sincerely,

Durga Datta Dhakal, Ph.D.
Dean and Professor



UNIVERSITY OF
STIRLING

INSTITUTE OF
AQUACULTURE

Pethfoot Building
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Stirling FK9 4LA

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16th March 2007

Dear Darwin Initiative

Re: Fellowship Application from Nepal

I confirm that the Institute of Aquaculture fully supports the application made by Anton Immink for a Fellowship for a member of staff from the Institute of Agriculture and Animal Science in Nepal to undertake a period of training at the University of Stirling and associated organisations from September 2007 until end of August 2008.

Sincerely

A handwritten signature in black ink, appearing to read 'Randolph Richards'.

Professor Randolph Richards
Director