

The University of Reading

**School of Plant Sciences
Department of Botany**



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Only a month has elapsed since the last *Herbarium News*, but there is much to report.

I also want to send you best wishes for Christmas and the New Year from all the
Herbarium RNG team!

Thank you all for sending in items of news. Please continue to do so, to:

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ASSOCIATED INSTITUTE STATUS FOR DEPARTMENT OF BOTANY, NATURAL HISTORY MUSEUM

We are delighted to announce that the Senate of the University has approved the association of the Botany Department of the Natural History Museum with the University of Reading with effect from 1 January 1995. This will consolidate the long-established and valued links between the School of Plant Sciences and the Museum. We also look forward to ever increasing interactions in teaching and research to take advantage of the many new opportunities flowing from increasing awareness of the need for systematics. We welcome four Museum staff as Honorary members of the Botany Department of the University - Dr. Stephen Blackmore, Dr. Chris Humphries, Dr. Sandy Knapp and Dr. Mary Gibby. We hope that they will feel at home in their new Department and will enjoy the interactions which the association will afford.

MORE PhD CONGRATULATIONS

Congratulations to **Georgini Venturieri** who successfully defended his PhD thesis on the reproductive biology of Cupuassu (*Theobroma grandiflora*). Georgini was examined by Dr Peter Gibbs of St Andrews.

Congratulations to **Aaron Davis** on the successful outcome of his recent PhD viva. He has now managed to determine all the specimens in his loans. Dr James Cullen came over from Cambridge to carry out the *viva voce* examination.

Discussions are underway to publish Aaron's revision of *Galanthus* as a monograph illustrated with Romilly Page-Wood's beautiful colour plates.

Liz Dauncey has also only just come down to earth after her successful PhD viva with Dr Martin Ingrouille of Birkbeck College, London University. Liz's thesis is on section *Pedilonum* of the orchid genus *Dendrobium*.

Saw Leng-Guan has also now had his *viva voce* examination with Dr Henrik Balslev of Aarhus, Denmark. He hopes to graduate this December!

BOTANICAL DIVERSITY OF THE INDO-MALAY PACIFIC

Ros Searle (MSc 1994) has just started a two-year research programme on the genus *Kaempferia* (Zingiberaceae) at the Aarhus node in our network. Ros expects to work in Aarhus until March when she will leave to undertake field work in Malaysia. She also expects to take part in the Zingiberaceae symposium to be held in Canton, China in May. She also will return to the UK and Kew for the Flora Malesiana symposium, co-ordinating meeting of the Network in July and Reading Cladistics Workshop (see elsewhere).

We congratulate Ros on her appointment and wish her all the best in this most exciting job.

We were also pleased that Dr Stefan Dressler (Leiden) called in to the Reading node of the network during his visit to Kew. It was a pity it was such a flying visit. Come again!

TAXONOMY MSc 1969-1994

We are celebrating the twenty-fifth anniversary of the running of our internationally renowned MSc. We are planning to hold a one-day symposium "*Plant Diversity and its Conservation*" on Friday, 7 July 1995 in the Plant Science Laboratories. We shall be inviting some of our MSc graduates to speak. The day will conclude with a celebratory

party. We hope as many of our MSc graduates as possible will be able to come. We have deliberately not clashed with the Flora Malesiana Symposium at Kew, the summer graduation day or our undergraduate field course. We shall endeavour to contact all former MSc graduates, but do please contact us with your current details (and those of any of your former classmates which you may know). Please keep the date clear! Can you present or send a poster?

TAXONOMY TRAINING COURSES

There will be a Cladistics Workshop in Reading, 17 - 19 July 1995, organized for members of the **Plant Diversity of the Indo-Malay Pacific Network**, co-ordinated by Professor Peter Baas and Dr Marco Roos in Leiden.

Professor JS Parker and Dr SL Jury attended a meeting of the **ERASMUS Network in Systematic Biology** on Friday, 18 November at the Museo Nacional de Ciencias Naturales, Madrid. It was agreed that Reading would host the next 'Intensive Training Course', 21 August - 15 September 1995. This will allow 20 participants from the 17 nodes of the Network (Universities and Research Institutes in: Helsinki, Uppsala, Amsterdam, Leiden, Bonn, Oxford, Cardiff, Reading, Bristol, Paris, Montpellier, Madrid, Padua, Firenze and Rome) to learn the philosophy and principles of taxonomy with the opportunity to gain experience with some of the latest computer programs for data analysis. (The course was last held in September in Amsterdam and was attended by Tim Upson).

After the meeting, John Parker attended a planning meeting in Madrid for the forthcoming 12th International Chromosome Conference to be held in El Escorial, Spain next year. John will be helping to edit the proceedings. Stephen, however, was whisked off by Dr Gonzalo Nieto Feliner (of the Real Jardin Botanico, Madrid) to the Sierra de Guadarrama to see the *Hedera* amongst the fountains of the royal palace at La Granja de San Ildefonso as well as check Epilobiums at Puerto de Navacerrada. Besides some profitable botany, it proved possible to visit Carlos Sombrero country and try the famous roast lamb cooked in traditional wood-burning ovens at Torrecaballeros in Segovia province.

BOTANICAL LATIN

There will be a day meeting on botanical Latin on Saturday, 4 February 1995, 11 am - 4 pm in PSL. The meeting will start with a talk from Professor WT Stearn on the nature of botanical Latin. It will also include a light-hearted look at grammar by Philip Oswald (entitled "Happy endings!") and a look at botanical Latin in mycology by Dr John David. Our own Gordon Rowley will conclude the day with an elaboration of some of the antics of botanists in relation to Latin. Further details are available from Dr Stephen Jury.

RETIREMENT OF DR SYED Z. HUSAIN

Syed will be taking early retirement from 31 January 1995.

Syed came to work in the Botany Department in 1968 when we were still based on the old London Road site (part of which is now Gyosei College). Syed acted as the laboratory manager and saw to smooth-running of a rapidly expanding Department under Professor VH Heywood. I remember these difficult times - Botany was scattered through more than five buildings! (Most of us Botany old stagers remember Agricultural Botany as the photocopy service with a distinguished Professor [the very approachable Hugh Bunting]. Valerie Norris, now Professor John Parker's secretary, was one of their Departmental Secretaries).

After moving into Plant Science Laboratories in 1972, Syed served both Departments of Botany and Agricultural Botany, looking after much of the administration (he was secretary of the 'House' committee) and finances. Syed then researched on the chemosystematics of the genus *Origanum* and related genera of the Lamiaceae and obtained his PhD in 1982. Since then, Syed has continued numerous research projects and been involved in many collaborative projects.

Syed will commence work as a Consultant on a United Nations Development Programme starting 8 February 1995. He will be advising and participating in the production of a Pollen Calender Atlas for Rawalpindi and Islamabad. He will be stationed at the Allergy Division, Pakistan Health Institute, Islamabad, where his work will involve the identifying of pollen responsible for local allergies. He is also planning to write some books, one on the flowers of Northern Pakistan with photographs, taxonomic and ethnobotanic descriptions of some 130 representative plants. Professor MTM Rajput of Sindh University (some readers may remember when he was here in PSL last year as a visiting Professor) has agreed to be a co-author in this venture. His other book on the poisonous plants of Pakistan will be in collaboration with Dr Mrs S. Malik, the director of the Pakistan Science Foundation. This is well advanced. Although it is clear that Syed will be very busy in the forthcoming year, he has promised to visit us when he is in the country.

We thank Syed for all his work in the past and give him our good wishes for the future.

PHYTOCHEMISTRY

Professor Jeffrey Harborne has recently been admitted as a fellow of the Institute of Biology. He represents plant sciences on the editorial board of the *Journal of Biological Education*, a journal published by the Institute.

Professor Harborne gave a plenary lecture on "The Ecological Role of Secondary Metabolites in Plants" at the UKaps Symposium on "Natural products as Drugs and Medicines" held at King's College, London on November 18th. At the same meeting Dr Christine Williams presented a poster with Dr JRS Hoult of the Pharmacology Group, King's College, London on "Inhibition of leukocyte 5-lipoxygenase by tanetin, a novel flavonol from feverfew, *Tanacetum parthenium*". Five other members of the Plant Sciences Phytochemistry Group also attended the meeting.

Charles Mills (Senior Microbiologist, Research and Development, The Body Shop) is working part-time on a higher degree project on antimicrobial compounds from plants for use as preservatives in cosmetic products. He is working with Dr VM Dillon and Prof. JS Parker. Dr Husain visited and worked at the Laboratorio de Fitoquímica Centro de Edafología y Biología Aplicada del Segura (CEBAS), Consejo Superior de Investigaciones Científicas (CSIC), Murcia, Spain, during 15 - 30 November with Dr Francisco A. Tomás-Barberán on analysis of lipophilic flavonoids in Labiate herbs which are used as herb condiments. The analysis was achieved by HPLC and Capillary Zone Electrophoresis in order to identify the flavonoid profiles which are characteristic of every spice, and useful in quality control determination. (Dr Husain would like to thank Paco and other members of the staff and students for very useful discussions during his stay).

VISITORS

Dr Lars Soderstrom (University of Trondheim, Norway) and **Dr Heinjo During** (Utrecht, The Netherlands) visited Dr Royce Longton and Dr Terry Hedderson during the last week in November to discuss the establishment of a Research Group to study European bryophyte populations.

Alison Kelly (Brassica Department, John Innes Institute, Norwich) came for two weeks, 31 October - 11 November, to work on *Brassica napus* chromosomes.

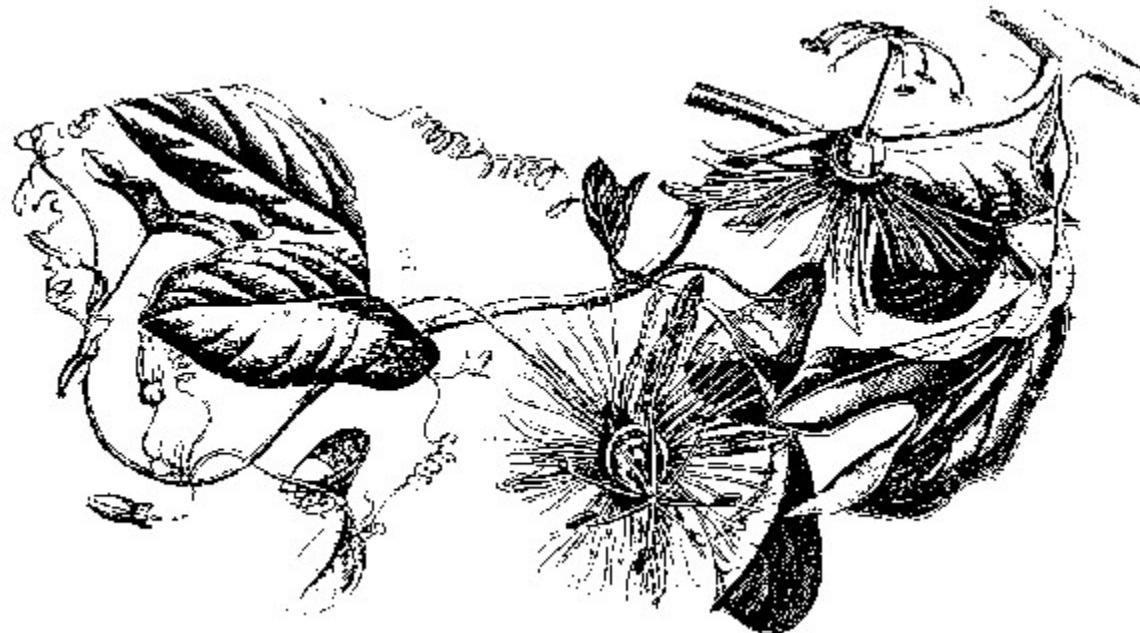
Miss Karin Rahman (University of Vienna) is working for two months in the Phytochemistry Laboratory identifying the biologically active flavonoids of *Passiflora incarnata* L. for her doctoral thesis.

Dr Pablo Vargas (Real Jardín Botánico, Madrid) is spending four weeks in the Herbarium working on the genus *Saxifraga* for *Flora Iberica* and the Floristic Biodiversity of N. Morocco project.

Dr David Bramwell (Jardín Botánico 'Viera y Clavijo', Las Palmas de Gran Canaria) is visiting the Herbarium and working on specimens of the genus *Silene* from the Canary Islands. (Dave moved down from Liverpool with Professor Vernon Heywood and was Curator of RNG until he left in 1974 for his present post - and "yes, I have just completed 20 years as Curator!").

Dave is actually recovering from an operation on his elbow. We wish him a speedy recovery.

Patricia Perisse (Ciencias Agropecuarias UNC, Botanica Agricola I, Cordoba, Argentina) came for two weeks to work on the chromosomes of legumes, in particular South American *Lupinus* species.



EASTER FIELD COURSE

We are again planning our usual field course to SE Spain. This time we again plan to take a number of interested 'tourists' along. This mix has worked well in the past and all learn a lot in areas of outstanding natural beauty (we visit three natural parks) and obtain a good introduction to Spanish culture.

We have been based in good self-catering apartments in Las Negras, Almeria, just N of the celebrated Cabo de Gata with its areas of very high endemism and extraordinary plants. We are well-situated for visits to the gypsum sites (more exciting endemics) and the "Badlands" with their spectacular erosion and landscape. A short visit (two nights) in Las Alpujarras means the Sierra Nevada can be visited and mountain vegetation in the Mediterranean observed. A visit is made to the crops and the plastic to measure productivity in relation to environmental factors and a comparison made with the UK situation. The course covers conservation, ecology, taxonomy, physiology and economic matters. Anybody interested in joining should contact Dr Jim Ross or Dr Stephen Jury at PSL (see address at the start of this News).

SOMALIAN FIELD WORK

Mr Abdisalam Hassan is going to Somalia in January to collect herbarium specimens and seeds. This is in conjunction with his PhD research studies on the genus *Ornocarpum* (Papilionoideae). Dr Mats Thulin from Uppsala University who is the co-ordinator of the Flora of Somalia will be accompanying him.

NEWS FROM GRADUATES

Rafic Dulymamode (MSc 1986) is now undertaking a research programme towards a PhD in Mauritius. Dr Paul Cannon (BSc 1978, PhD 1981) now working at the CAB International Mycological Institute, Egham, has been appointed his external supervisor. Paul has the "task of spending two weeks in Mauritius in January helping him get going" - sounds awful!

EUROPEAN GARDEN FLORA

Proofs of volume 4 are now being returned to Cambridge University Press who hope to publish it in March 1995.

There is good news with regard to the publication of the remaining volumes 5 and 6. Sabina Knees (BSc 1981, MSc 1982) will continue to work on this project but now part time. (The remainder of her time being devoted to editing *The New Plantsman*, the splendid newly revamped publication of the Royal Horticultural Society, Vicky Matthews has resigned as Editor of this quarterly, having moved to the US to join her husband, Brinsley Burbidge, now Director of The Fairchild Botanic Garden in Florida). James Richardson (MSc in Taxonomy 1992) who has been working on the EGF, having been employed on several short-term contracts, now has a two-year contract as a Research Associate and continues to be based at Edinburgh. This has been made possible by an anonymous grant of 48,000 (pounds sterling) for which we are very grateful to the donors.

It is anticipated that all manuscripts for volume 5 will be in Edinburgh by the end of 1994, diskettes, plates etc. being sent to press April 1995. Publication of volume 6 (and the completion of the work) is planned for October 1997.



OBITUARY

Dr Ru D. Hoogland died suddenly in Paris recently following an operation. We got to know Ru through the Leiden 'Botanical Diversity of the Indo-Malay Pacific' E.U. Network. He was helping Dr Helen Fortune-Hopkins at the Paris node of our Network on Cunoniaceae research for he had accumulated an enormous amount of data on this family.

Ru was born in Leenwarden, the Netherlands, and trained at the Universities of Groningen and Leiden. For many years, he worked in New Guinea for the Australian CSIRO Division of Land Research. From 1968 to 1970 he was a Research Fellow at the Australian National University, Canberra but on retirement returned to Europe, first to Leiden and latterly lived in Paris. Here he continued his studies of various families, particularly the Dilleniaceae. He had visited Norfolk Island and Lord Howe Island several times and the recent *Flora of Australia* volume 49 (the Flora of these two islands was almost entirely written by Peter Green of Kew) published last May, was dedicated to him. Latterly, he had been deeply involved with nomenclatural matters, especially the names of families. At times for some years, he had been seriously ill but during periods of remission, had worked at the Natural History Museum in Paris. He will be much missed.

PICKERSGILL'S TRAVELS

(Reprinted from Plant Science News, 3(2): 1-2 (December 1994).

In September, Dr Barbara Pickersgill made a supervisory visit to Alejandro Casas, who is working on variation and domestication in *Stenocereus stellatus*, one of the columnar cacti of Mexico. She stayed with Alejandro and Alicia in their home in a village 800m above Mexico City (which is itself at an altitude of 2200m), with spectacular views towards the two snow-capped volcanoes, Popocatepetl and Iztaccihuatl (but not in the rainy season). She gave a seminar at the Centro de Ecología, Universidad Nacional Autónoma de México, and saw and discussed the work of the University's Institute of Biology and its Botanic Garden on conservation and propagation of some of Mexico's endangered endemic species.

She also participated in a 3-day field trip to the Tehuacan Valley, where she saw giant cacti, up to 12m tall, at densities of up to 1200 individuals per hectare and so slow-growing that some individuals may have been there when the Conquistadors arrived. She visited the El Riego caves, which have produced some early archaeobotanical remains but which are now being obliterated by construction of a new motorway, and was presented with some souvenirs that the archaeologists had not considered worth preserving. She sampled roasted grasshoppers, but refused fried caterpillars. She ate hot pepper icecream and *Stenocereus* icecream, but declined cheese icecream or pork crackling icecream. And she nevertheless avoided Montezuma's Revenge!

She went on to make a supervisory visit to Paul House (MSc in Pure and Applied Plant Taxonomy, 1986) who went out to Honduras in 1986, sponsored by the Catholic Institute

for International Relations, to work on the traditional medicinal plants of Honduras. The *Manual Popular de 50 Plantas Medicinales* that he produced is now in its 3rd edition, has sold over 10,000 copies in the Spanish version, and has appeared in a pirated English version. This Manual was directly responsible for Paul being invited by the Tawahka, an indigenous tribe now reduced to about 700 people, to make a similar study of their medicinal plants. This has grown into a wider investigation of the ethnobotany and agriculture of the Tawahka, supervised jointly by the Department of Agricultural Botany and the Department of Botany at The Natural History Museum.

The Tawahka live along the Rio Patuca in the region of Honduras known as La Mosquitia, which is unconnected by road to any other part of Honduras and is poorly known botanically. Reaching the Tawahka reserve involved a 3-day journey from the capital of Honduras; two internal flights to reach Ahuas, the voodoo, mosquito and sandfly capital of the Mosquitia; hire of the Moravian missionaries' air ambulance to fly to a military airstrip in the middle of nowhere, (though formerly used for supplying arms to the Nicaraguan contras); walking half an hour to the nearest village, carrying assorted luggage including the pieces of printed cloth, glass beads, cooking pots and old-fashioned flatiron requested by the Tawahka and balancing precariously across bridges formed from two treetrunks; and then hitching a boat ride upriver to the first and largest of the Tawahka villages. Getting back began with a wake-up call at 2.30 am in order to catch a dugout canoe that was supposedly leaving at 3 am for a 6 hour trip down a very full and shark-infested river to take a sick Tawahka woman to hospital, followed by a wait of over 40 hours for the next flight out with little more to eat than the oranges, can of apple nectar and packets of salted crackers that could be purchased at the local shop and nowhere to live except a 1-roomed office, chaperoned by a tarantula.

In between, she slipped and slid along the sticky clay of the forest trails to see the Tawahka's swidden fields and the crops grown therein, and the plots and belt transects laid out for study of different stages of fallow and different types of mature rainforest. She saw scarlet macaws, an antbear and tapir tracks along the trail. Those who know what a tapir sounds like reckoned that they also heard one, and made the party beat a hasty retreat, since a charging tapir is dangerous if all you have to defend yourself with is a machete.

Paul's project has already produced new records for Honduras of species better known further south, for example in the Amazon Basin. He hopes that he will not only show the impact of the tawahka on their rain forest environment but also the extent to which their use of the forest is sustainable, in contrast to the logging, followed by attempts to establish pasture for cattle, which are already beginning to encroach on Tawahka territory.

MOROCCO AGAIN

Professor Vernon Heywood and Dr Stephen Jury attended the workshop 'Conservation of Plant Genetic Resources' held recently (24 - 26 October) at the Institut Agronomique et Veterinaire Hassan II in Rabat. Professor Heywood read two papers and chaired one of the sessions.

Vernon flew back to the UK while Stephen was presented with a practically new Nissan Patrol to undertake further collecting for the Floristic Biodiversity of Northern Morocco Project, concentrating again on the autumn-flowering bulbs. He met Dr Terry Hedderson at Casablanca Airport and set off with Mohamed Ait Lafkhi from IAV, Hassan II and Dr Azzeddine Kahouadji of the University in Rabat. A tour was made to the north collecting on the way to Larache. The start next day was delayed by a massive storm, but collections were made around the salt pans and on the coast just N of Larache and the Oued Loukos. Although eaten alive by flies, delights such as *Ipomoea stolonifera* and *Iris planifolia* in full flower kept the team going. The following journey over the mountains to Chefchaoūn on a tiny track through Souk-Khemis-des-Beni-Arouss took us through splendid *Quercus suber* trees amongst enormous granite boulders all completely covered with epiphytes - both mosses and ferns. With all these cryptogams, Terry was clearly on a high and without assistance from any traditional Moroccan phanerogams. A return was made to Rabat and Casablanca to meet Ronnie Rutherford who arrived from Heathrow in the late evening of 31 October (just early enough to save paying the new UK airport tax).

A second tour followed, with collecting starting in the Fōret de la Mamora, c. 7 km NE of Sidi-Allal-el-Bahraoui at the site of the largest known Moroccan *Quercus suber*. (A splendid specimen about 2m diameter and with all its cork intact). Nearby grew *Pyrus marmorensis* and numerous bulbs (including *Scillas*, *Crocus*, *Leucojum*, *Urginea*s and *Merendera*!). The ruins of Volubilis with its spectacular Roman mozaics and pillars is also a good botanical site with *Narcissus elegans*, *Colchicum*, *Merendera*, *Scilla lingulata*, *Ajuga iva* and *Mandragora autumnalis* in full flower, enabling a complementary collection to the one made earlier in June. The party arrived in ŠFes to be lavishly entertained to dinner by Madame Sa'ad Debbagh and her family in her brother's house. This splendid Moroccan meal will be remembered by the team for many years! A visit to the Jbel Tazzeka Natural Park enabled Terry to examine the bryophytes in the Gouffre de Friouata. Fortunately, the party had torches, as although the extraordinary lime stone sinkhole cum grotto is normally always gloomy, by the time the party arrived it was already dark. This fortunately stopped Stephen undertaking any further collecting, and sadly photography of the spectacular scenery above Taza!

It was outside Oujda that the Biarums were first encountered, with *B. bovei* near Sidi Bouhria and another species (as yet unidentified and seemingly not previously recorded in Morocco). The Beni Snassen Mountains had numerous other interesting plants, including the tallest *Chamaerops humilis* ever seen in the wild. Unfortunately, it came on to rain and a perilous journey was made on slippery tracks covered with deep red mud down into and along the Gorge du Zegzel, again in the dark. The party all plan to return but in the daylight and at a different time of year!

The visit to Al Hoceima for a night gave the opportunity for a change of diet with splendid mixed platter of fried and grilled seafood. The route to Ketama was bleak but with *Ilex aquifolium* spectacularly in fruit. *Prunus lusitanica* (Portuguese Laurel) was also fruiting well near the road in open Cedar forest. Terry was eventually prised away from the moss-covered boulders and dragged reluctantly back into the Nissan. After a night in Chefchaou n, the team returned to Rabat, tempted to make further collections of *Iris planifolia* and autumn bulbs en route. The brief stop in Rabat allowed some necessary souvenirs to be purchased in the Medina. The experience of Mohamed negotiating a leather jacket for Terry had to be seen to be believed. After this seminar by Mohamed on trading methods, the team will feel more confident in future negotiations!

MEETINGS IN SCOTLAND

Roger Hyam (MSc 1988, PSL Photographer 1990-1992), now working in Edinburgh at the Royal Botanic Garden, reports that he has an e-mailing list to keep people informed of events relating to whole-plant botany and systematics that occur in Scotland, especially within reach of the central belt. Roger can be contacted on  ROGER@rbge.org.uk or by Phone +44(0)131.552.7171 and Fax +44(0)131.552.0382.

PLATO-UK

This project is the joint winner of the British Computer Society Award for 1994. Congratulations to Christine Leon, Dr Liz Dauncey (PhD 1994), Mark Jackson and Dr Tim Rayner (PhD 1992), workers at Kew on this project who have recently collected a medal and trophy at an awards ceremony in the Waldorf Hotel, London on 30 November.

This project named Plato (PLAnt TOxins) is an interactive image-based computer system for the identification of poisonous plants. (Plato is also an appropriate name for this project as he was a student of Socrates who was condemned to poisoning by hemlock). The RBG Kew and the National Poisons Unit at Guy's and St Thomas's Hospital have developed a botanical identification system for poisonous plants. The project addresses an urgent need by medical professionals, especially in hospital accident and emergency departments, for the rapid and accurate identification of plants suspected of causing poisoning. Plants have been rushed to our herbarium from the Royal Berkshire Hospital on several occasions for identification. In our case, twice *Ruta graveolens* 'Jackmans Blue' (a popular garden plant and one causing extremely severe allergy reactions, especially in the bright sun) and a *Oenanthe* species.