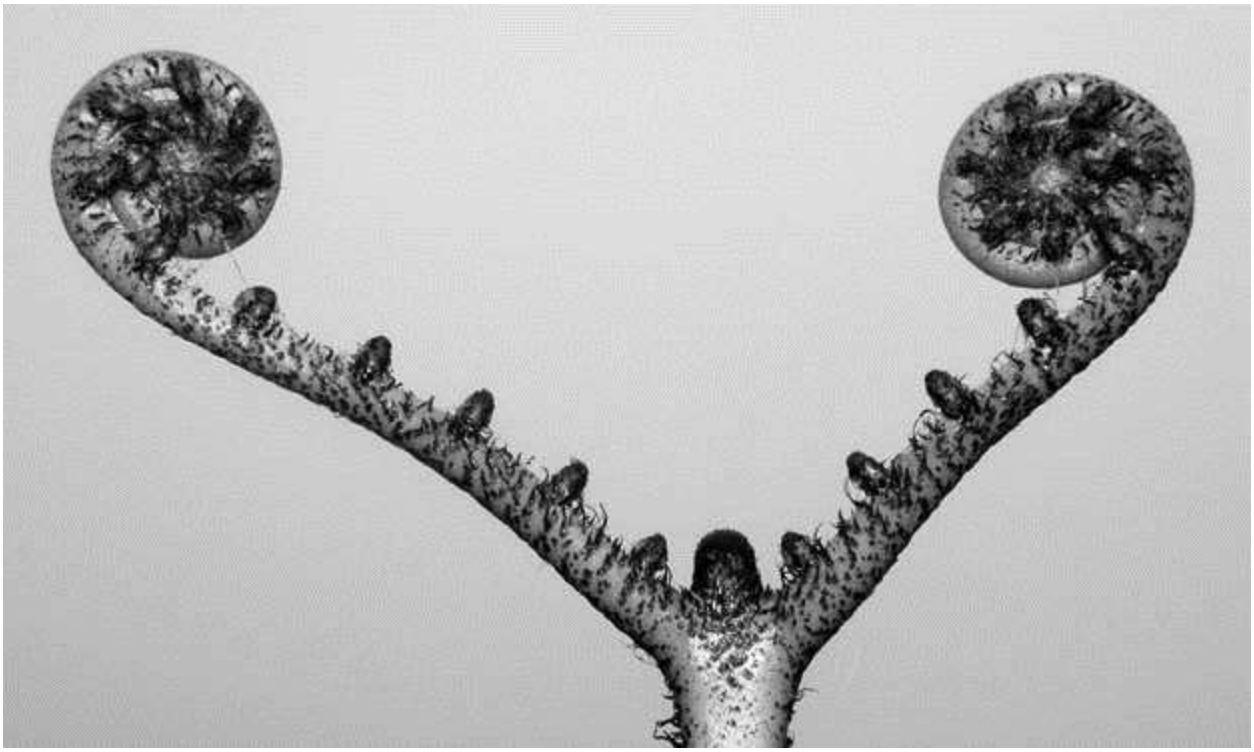
Annual Review of Pteridological Research



Volume 28 2014

ANNUAL REVIEW OF PTERIDOLOGICAL RESEARCH

VOLUME 28 (2014)

Compiled by
Klaus Mehltreter & Elisabeth A. Hooper

Under the Auspices of:
International Association of Pteridologists

AND

Pteridological Section, Botanical Society of America
Kathleen M. Pryer, Chair

Published by Printing Services, Truman State University, December 2015 (ISSN 1051-2926)

TABLE OF CONTENTS

Cover photo: *Diplopterygium pinnatum*, Oahu, Hawai'i (Klaus Mehltreter)

INTRODUCTION

In 2014 research of ferns and lycophytes continued at a fast pace. A large number of publications came once more from phytochemical studies in search of antibiotics and treatments against diseases such as cancer (e.g., *Cibotium barometz, Macrothelypteris torresiana*) and Alzheimer's (e.g. *Huperzia serrata*) or even remediation against hair loss (e.g., *Adiantum capillus-veneris*). Interestingly, studies indicated that in some plants endophytic fungi might be responsible for some bioactive chemical constituents (e.g., Gutam et al. 2014, Shu et al. 2014). Also on the medical front, empty spores of *Lycopodium clavatum* were investigated to serve as shells for oral vaccination (Atwe et al. 2014). Some ferns were intensively studied because of their biosorption capabilities for wastewater treatment (e.g., *Azolla, Salvinia*) or for phytoremediation of heavy metal polluted soils (e.g., *Pteris vittata*). One surprising new result was a study showing that terrestrial ferns acquired a new photoreceptor from bryophytes by horizontal gene transfer (Li et al. 2014), presumably as an adaptation for survival in low-light conditions in the dark understory where they were forced when angiosperms became dominant on our planet. Another interesting paper showed that while herbivores are often seen as enemies of plants, preferential feeding on angiosperms by deer in the upper Midwest (USA) may have increased the abundance of some fern species (Frerker et al. 2014). On the other hand, some ferns are regularly eaten by animals such as gorillas (Reiner et al. 2014) and grizzly bears (Gunther et al. 2014). Finally, a wonderful example of long-distance dispersal and spore longevity was shown by Lewis-Smith (2014), who grew a species of *Elaphoglossum* collected from detritus of an Antarctic glacier. We are sure that you will find other interesting references in this edition of ARPR, which will help you with your own research and stimulate your imagination. Ferns are fun, indeed!

This *Annual Review of Pteridological Research* (ARPR, ISSN 1051-2926) provides a comprehensive list of 946 literature citations on ferns and lycophytes published during 2014, an index to authors and keywords, and a description of research interests and contact information of pteridologists who answered our annual questionnaire.

Joanne M. Sharpe supported this year's issue by contributing database searches. Elisabeth Hooper took charge of the annual questionnaire, directory and research interests of respondents. Klaus Mehltreter compiled and formatted the literature citations and index. We hope that the continuous publication of ARPR will enhance access to information published about ferns and lycophytes worldwide and stimulate further collaboration among pteridologists.

If you are not on our mailing list but would like to receive information about how to be included in future issues, or if you would like to obtain back issues of the *Annual Review of Pteridological Research* please contact Elisabeth A. Hooper, Treasurer, International Association of Pteridologists, Biology Department, Truman State University, 100 E Normal Street, Kirksville MO 63501-4221 USA (iapferns@gmail.com). For feedback on this year's issue, please contact Klaus Mehltreter, Instituto de Ecología, A. C., Red de Ecología Funcional, carretera antigua a Coatepec No. 351, El Haya, 91070 Xalapa, Ver., Mexico (klaus.mehltreter@inecol.mx). On-line access to the literature from back issues since 1994 is available on the website of the American Fern Society (www.amerfernsoc.org).

Klaus Mehltreter, Xalapa
Elisabeth Hooper, Kirksville

1. Abu Baker, M. A. & Brown, J. S. 2014. Foraging and habitat use of common duikers, *Sylvicapra grimmia*, in a heterogeneous environment within the Soutpansberg, South Africa. African Journal of Ecology 52(3): 318-327. [herbivory].
2. Acock, P. 2014. Starting in ferns. Pteridologist 6(1): 34-35.
3. Adams, S. A. & Morse, D. H. 2014. Condition-dependent mate choice of a parasitoid wasp in the field. Animal Behaviour 88: 225-232. [Herpetogramma theseusalis, Maine, *Onoclea sensibilis*, plant-insect interactions].
4. Aguilar, M. I., Benitez, W. V., Colin, A., Tovar, A. & Calzada, F. 2014. Evaluation of the diuretic activity in two Mexican medicinal species: *Selaginella nothohybrida* and *S. lepidophylla*. 55th Annual Meeting of the American Society of Pharmacognosy (ASP), Oxford, MS, p. 817. [medicinal plants].
5. Aguilar-Dorantes, K., Mehltreter, K., Vibrans, H., Mata-Rosas, M. & Esqueda-Esquivel, V. A. 2014. Repeated selective cutting controls neotropical bracken (*Pteridium arachnoideum*) and restores abandoned pastures. Invasive Plant Science and Management 7(4): 580-589. [invasive species, land management, mechanic control].
6. Aguirre, H. & Shaw, S. R. 2014. *Meteorus* Haliday (Hymenoptera: Braconidae) parasitoids of Pyralidae: description and biology of two new species and first record of *Meteorus desmiae* Zitani, 1998 from Ecuador. Journal of Natural History 48: 2375-2388. [*Diplazium costale*, Ecuador, herbivory, insects, wasps].
7. Ajaib, M., Haider, S. K., Zikrea, A. & Siddiqui, M. F. 2014. Ethnobotanical studies of herbs of Agra valley, Parachinar, Upper Kurram Agency, Pakistan. International Journal of Biology and Biotechnology 11(1): 71-83.
8. Alagador, D., Cerdeira, J. O. & Araujo, M. B. 2014. Shifting protected areas: scheduling spatial priorities under climate change. Journal of Applied Ecology 51(3): 703-713. [conservation, *Marsilea quadrifolia*].
9. Alday, J. G. & Marrs, R. H. 2014. A simple test for alternative states in ecological restoration: the use of principal response curves. Applied Vegetation Science 17(2): 302-311. [methods, *Pteridium aquilinum*, restoration].
10. Allen, J. L., Clusella-Trullas, S. & Chown, S. L. 2014. Thermal tolerance of *Cyrtobagous salviniae*: a biocontrol agent in a changing world. BioControl 59(3): 357-366. [biological control, *Salvinia molesta*, South Africa].
11. Alves, F. E. & Neto, L. M. 2014. Vascular epiphytes in a forest fragment of Serra da Mantiqueira and floristic relationships with Atlantic high altitude areas in Minas Gerais. Brazilian Journal of Botany 37(2): 187-196. [floristics].
12. Aly, C. & Fischer, H. J. 2014. Hilpertsau, a new nature reserve in Baden-Wurttemberg, Germany. Carolinea 72: 143-156. [*Pteridium aquilinum*, weed control; German].
13. Ameri, H., Khalilizade, H. & Zamani, F. 2014. Four new *Equisetites* species (Sphenophyta) from the Hojedk Formation, Middle Jurassic (Bajocian-Bathonian), the North of Kerman, Iran. Journal of Sciences-Islamic Republic of Iran 25(3): 253-264.
14. Amoroso, V. B., Lagumbay, A. J. D., Mendez, R. A., De La Cruz, R. Y. & Villalobos, A. P. 2014. Bioactives in three Philippine edible ferns. Asia Life Sciences 23(2): 445. [*Diplazium esculentum, Marsilea crenata, Stenochlaena palustris*].
15. Anjum, N. A., Gill, S. S., Khan, I. & Gill, R. 2014. Environmental change, and plant amino acids and their derivatives - an introduction. In: Anjum, N. A., Gill, S. S. & Gill, R. (eds.). Plant adaptation to environmental change: significance of amino acids and their derivatives. CABI Publishing, Wallingford, Oxon, UK, pp. 1-17. [*Selaginella lepidophylla*].
16. Anonymous 2014. PM 9/19 (1) Invasive alien aquatic plants. Bulletin OEPP 44(3): 457-471. [*Salvinia molesta*].
17. Antony, R. 2014. Some comments on the paper "Natural apospory in *Pteris argyraea* T. Moore from South India". by Raju Antony, S M Shareef and N Mohanan in Indian Fern Journal 29: 148-152 Reply. Indian Fern Journal 31(1-2): 153.

18. Antony, R., Fraser-Jenkins, C. R., Mohanan, N. & Koshy, C. P. 2014. *Tectaria puberula* (Desv.) C. Cur. (Dryopteridaceae : Pteridophyta), a new record for Asia. Indian Fern Journal 31(1-2): 139-142.
19. Arana, M. D., Reinoso, H. & Oggero, A. J. 2014. Morphology and anatomy of caulinar axes, lycophylls and sporangia of *Phlegmariurus phylicifolius*: a contribution to the systematics of neotropical Lycopodiaceae. Revista de Biologia Tropical 62(3): 1217-1227. [Spanish].
20. Arana, M. D., Yanez, A. & Schwartsburd, P. B. 2014. An updated synopsis of *Hypolepis* Bernh. (Dennstaedtiaceae) from Argentina. Phytotaxa 188(2): 91-102.
21. Aranha, P. C. R., Hansen, H. C. B., Rasmussen, L. H., Strobel, B. W. & Friis, C. 2014. Determination of ptaquiloside and pterosin B derived from bracken (*Pteridium aquilinum*) in cattle plasma, urine and milk. Journal of Chromatography B 951: 44-51. [cancer, ptaquiloside].
22. Assis, F. C. & Zimmer, B. 2014. Notes concerning the nomenclature of *Polypodium ptiloton* and its correct spelling in Pecluma. Taxon 63(3): 641-642.
23. Atwe, S. U., Ma, Y. & Gill, H. S. 2014. Pollen grains for oral vaccination. Journal of Controlled Release 194: 45-52. [Lycopodium clavatum, spores].
24. Azuma, M., Yoshikawa, T., Kogure, N., Kitajima, M. & Takayama, H. 2014. Biogenetically inspired total syntheses of *Lycopodium* alkaloids, (+)-flabellidine and (-)-lycodine. Journal of the American Chemical Society 136(33): 11618-11621.
25. Baas, P., Hovenkamp, P. H. & Veldkamp, J. F. 2014. Hans Nooteboom 80 years. Blumea 59(1): I-II.
26. Babu, D. J., Sumalatha, B., Venkateswarulu, T. C., Das, K. M. & Kodali, V. P. 2014. Kinetic, equilibrium and thermodynamic studies of biosorption of chromium (VI) from aqueous solutions using *Azolla filiculoides*. Journal of Pure and Applied Microbiology 8(4): 3107-3116.
27. Bach, H. G., Wagner, M. L., Ricco, R. A. & Fortunato, R. H. 2014. Sale of medicinal herbs in pharmacies and herbal stores in Hurlingham district, Buenos Aires, Argentina. Revista Brasileira de Farmacognosia-Brazilian Journal of Pharmacognosy 24(2): 258-264. [*Equisetum giganteum*].
28. Badarudeen, A., Sajan, K., Srinivas, R., Maya, K. & Padmalal, D. 2014. Environmental significance of heavy metals in leaves and stems of Kerala mangroves, SW coast of India. Indian Journal of Geo-Marine Sciences 43: 1021-1029. [*Acrostichum aureum*].
29. Baeten, L., Warton, D. I., Van Calster, H., De Frenne, P., Verstraeten, G., Bonte, D., Bernhardt-Roemermann, M., Bernhardt-Roemermann, M., Decocq, G., Eriksson, O., Hedl, R., Heinken, T., Hermy, M., Hommel, P., Kirby, K., Naaf, T., Petrik, P., Walther, G. R., Wulf, M. & Verheyen, K. 2014. A model-based approach to studying changes in compositional heterogeneity. Methods in Ecology and Evolution 5(2): 156-164. [*Dryopteris carthusiana*, plant communities, *Pteridium aquilinum*, species turnover].
30. Bagniewska-Zadworna, A., Barakat, A., Lakomy, P., Smolinski, D. J. & Zadworny, M. 2014. Lignin and lignans in plant defense: Insight from expression profiling of cinnamyl alcohol dehydrogenase genes during development and following fungal infection in *Populus*. Plant Science 229: 111-121. [genetics, *Selaginella moellendorffii*].
31. Baker, K., Lambdon, P., Jones, E., Pellicer, J., Stroud, S., Renshaw, O., Niissalo, M., Niissalo, M., Clubbe, C. & Sarasan, V. 2014. Rescue, ecology and conservation of a rediscovered island endemic fern (*Anogramma ascensionis*): *ex situ* methodologies and a road map for species reintroduction and habitat restoration. Botanical Journal of the Linnean Society 174: 461-477. [Ascension Island, conservation].
32. Balazi, P., Hrivnak, R. & Ot'ahelova, H. 2014. The relationship between macrophyte assemblages and selected environmental variables in reservoirs of Slovakia examined for the purpose of ecological assessment. Polish Journal of Ecology 62(3): 543-558. [*Azolla filiculoides*, land management, plant communities].
33. Balestri, M., Bottega, S. & Spano, C. 2014. Response of *Pteris vittata* to different cadmium treatments. Acta Physiologiae Plantarum 36(3): 767-775.

34. Balestri, M., Ceccarini, A., Forino, L. M. C., Zelko, I., Martinka, M., Lux, A. & Castiglione, M. R. 2014. Cadmium uptake, localization and stress-induced morphogenic response in the fern *Pteris vittata*. Planta 239(5): 1055-1064. [phytoremediation].
35. Bandyopadhyay, M. 2014. Loss of fern diversity by proverbial dictum of '*Khana*'. National Seminar on Cryptogamic Botany, Amazing Cryptogams: learning to know. Department of Botany, University of Kalyani, West Bengal, India. p. 29-30. [conservation].
36. Bao, J., Cao, J., Wang, Q. & Dai, X. 2014. Microstructural observation on the development of gametophytes and oogenesis in the fern *Stenoloma chusanum*. Acta Botanica Boreali Occidentalia Sinica 34(7): 1352-1357. [germination; Chinese].
37. Barbhuiya, H. A. & Singh, S. K. 2014. Pteridophytes of Thorangtlang Wildlife Sanctuary, Mizoram, India. Journal of Threatened Taxa 6(9): 6249-6268. [floristics].
38. Barcelona, J. F. & Pelser, P. B. 2014. *Phanerosorus* (Matoniaceae), a new fern genus record for the Philippines. Phytotaxa 170(2): 133-135.
39. Barkan, A. & Small, I. 2014. Pentatricopeptide repeat proteins in plants. Annual Review of Plant Biology 65: 415-442. [genetics, *Selaginella*].
40. Barros, I. C. L., Cantarelli, L. C., Farias, R. D. P., de Novaes Pereira, A. F. & Araujo da Silva, I. A. 2014. Vertical distribution of epiphytic ferns in a fragment of the Atlantic forest in the Brazilian Northeast. Iheringia Serie Botanica 69(1): 143-153. [Portuguese].
41. Barta, J., Slajsova, P., Tahovska, K., Picek, T. & Santruckova, H. 2014. Different temperature sensitivity and kinetics of soil enzymes indicate seasonal shifts in C, N and P nutrient stoichiometry in acid forest soil. Biogeochemistry 117(42065): 525-537. [*Athyrium alpestre*, Bohemia, nutrients, soil chemistry].
42. Barth, G., Franz, M., Heunisch, C., Kustatscher, E., Thies, D. & Vespermann, J. & Wolfgramm, M. 2014. Late Triassic (Norian-Rhaetian) brackish to freshwater habitats at a fluvial-dominated delta plain (Seinstedt, Lower Saxony, Germany). Palaeobiodiversity Palaeoenvironments 94(4): 495-528. [fossils].
43. Bashforth, A. R., Cleal, C. J., Gibling, M. R., Falcon-Lang, H. J. & Miller, R. F. 2014. Paleoecology of early Pennsylvanian vegetation on a seasonally dry tropical landscape (Tynemouth Creek Formation, New Brunswick, Canada). Review of Palaeobotany & Palynology 200: 229-263. [Canada, Carboniferous, fossils, New Brunswick, Pennsylvanian].
44. Bautista Cruz, A., Arias, N. M., Camargo Ricalde, S. L. & Pacheco, L. 2014. Hongos micorrizógenos arbusculares y nutrimentos del suelo asociados a cuatro species de helechos en dos ecosistemas de Oaxaca, México. Revista Chapin Serie Ciencias Forestales y del Ambiente 20(3): 199-212. [Spanish, English].
45. Bell, N. E., Boore, J. L., Mishler, B. D. & Hyvonen, J. 2014. Organellar genomes of the four-toothed moss, *Tetraphis pellucida*. BMC Genomics 15: 383. [genetics, Huperzia squarrosa].
46. Benca, J. P. 2014. Cultivation techniques for terrestrial clubmosses (Lycopodiaceae): conservation, research, and horticultural opportunities for an early-diverging plant lineage. American Fern Journal 104(2): 25-48.
47. Benca, J. P. 2014. Erratum: Cultivation techniques for terrestrial clubmosses (Lycopodiaceae): conservation, research, and horticultural opportunities for an early-diverging plant lineage (vol 104, pg 25, 2014). American Fern Journal 104(3): 179.
48. Benca, J. P., Carlisle, M. H., Bergen, S. & Stroemberg, C. A. E. 2014. Applying morphometrics to early land plant systematics: a new *Leclercqia* (Lycopsida) species from Washington State, USA. American Journal of Botany 101(3): 510-520. [fossils].
49. Bennert, H. W., Sonneborn, I. & Horn, K. 2014. The Least Moonwort (*Botrychium simplex*, Ophioglossaceae) in Germany. Tuexenia (34): 205-232. [German].
50. Bennett, T., Brockington, S. F., Rothfels, C., Graham, S. W., Stevenson, D., Kutchan, T., Rolf, M., Rolf, M., Wong, G. K. S., Leyser, O., Glover, B. J. & Harrison, C. J. 2014. Paralogous radiations of PIN proteins with multiple origins of noncanonical PIN structure. Molecular Biology and Evolution 31(8): 2042-2060. [auxin, evolution, hormones, *Selaginella*].

51. Bergeron, A. & Pellerin, S. 2014. Pteridophytes as indicators of urban forest integrity. Ecological Indicators 38: 40-49. [Canada, Quebec].
52. Bernardi, J., Roig-Villanova, I., Marocco, A. & Battaglia, R. 2014. Communicating across generations: the B-sister language. Plant Biosystems 148(1): 150-156. [genetics, MADS-box gene, proteins].
53. Bigelow, N. H., Edwards, M. E., Elias, S. A., Hamilton, T. D. & Schweger, C. E. 2014. Tundra and boreal forest of interior Alaska during terminal MIS 6 and MIS 5e. Vegetation History and Archaeobotany 23: 177-193. [fossils, Pleistocene, spores].
54. Birri, M. A., Franco, M. A., Vallejo, M. G., Carro-Juarez, M. & Agnese, A. M. 2014. *Huperzia saururus* Lam. Trevis. (Lycopodiaceae) facilitates ejaculation in spinal cord transected male rats. Journal of Ethnopharmacology 157: 38-44. [medicinal plants].
55. Bissegger, S., Rodriguez, M., Brisson, J. & Weber, K. P. 2014. Catabolic profiles of microbial communities in relation to plant identity and diversity in free-floating plant treatment wetland mesocosms. Ecological Engineering 67: 190-197. [carbon balance, *Salvinia molesta*].
56. Blackham, G. V., Webb, E. L. & Corlett, R. T. 2014. Natural regeneration in a degraded tropical peatland, Central Kalimantan, Indonesia: Implications for forest restoration. Forest Ecology and Management 324: 8-15. [*Blechnum indicum*, *Nephrolepis hirsutula*, *Pteridium esculentum*, *Stenochlaena palustris*].
57. Blake, P. 2014. Ticks, Borrelia and Lyme disease. Pteridologist 6(1): 22-23. [*Pteridium*].
58. Bleich, M. E., Fernandez Piedade, M. T., Knopki, P. B., Duarte de Castro, N. G., Jati, S. R. & de Sousa, R. N. 2014. Influence of the habitat conditions on the structure of aquatic herbaceous in the Catalao Lake region, Manaus, AM. Acta Amazonica 44(4): 481-489. [plant communities, *Salvinia auriculata*; Portuguese].
59. Bobach, C., Schurwanz, J., Franke, K., Denkert, A., Tran, V. S., Kuster, R., Mutiso, P. C., Seliger, B. & Wessjohann, L. A. 2014. Multiple readout assay for hormonal (androgenic and antiandrogenic) and cytotoxic activity of plant and fungal extracts based on differential prostate cancer cell line behavior. Journal of Ethnopharmacology 155(1): 721-730. [*Cibotium barometz*, *Cyrtomium falcatum*, *Nephrolepis exaltata*].
60. Bomfleur, B., McLoughlin, S. & Vajda, V. 2014. Fossilized nuclei and chromosomes reveal 180 million years of genomic stasis in Royal ferns. Science 343(6177): 1376-1377. [chromosomes, Jurassic, *Osmunda*, Sweden].
61. Bonacheva, V. M. & Botirov, E. K. 2014. Kaempferol and its glycosides from *Equisetum silvaticum* L. from the Khanty-Mansi autonomous area. Russian Journal of Bioorganic Chemistry 40(7): 777-780. [medicinal plants].
62. Borokini, T. I. 2014. A systematic compilation of endemic flora in Nigeria for conservation management. Journal of Threatened Taxa 6(11): 6406-6426. [floristics].
63. Borruel-Abadia, V., Belen Galan-Abellan, A., Kustatscher, E., Dieguez, C., Lopez-Gomez, J., De la Horra, R., Barrenechea, J. F. & Arche, A. 2014. Palaeoenvironmental reconstruction of the early Anisian from sedimentology and plant remains in the SE Iberian Range (E Spain). Palaeogeography Palaeoclimatology Palaeoecology 414: 352-369. [fossils].
64. Boudrie, M. & Cremers, G. 2014. Taxons de ptéridophytes décrits par Aublet dans son Histoire des plantes de la Guiane françoise 1775. Journal de Botanique de la Société Botanique de France 65: 85-90. [French Guiana; French].
65. Boudrie, M. 2014. Les ptéridophytes du mont Itoupé – Sommet tabulaire (Parc Amazonien de Guyane – Guyane française). Rapport interne Parc Amazonien de Guyane, pp. 33. [floristics, French Guiana; French].
66. Brana, S., Vukovic, N. & Kaligaric, M. 2014. Least adder's-tongue (*Ophioglossum lusitanicum* L.) in Croatia - distribution, ecology and conservation. Acta Botanica Croatica 73(2): 471-480.
67. Breen, A. L. 2014. Balsam poplar (*Populus balsamifera* L.) communities on the Arctic slope of Alaska. Phytocoenologia 44(42036): 1-17. [*Cystopteris montana*, floristics].

68. Broadbent, E. N., Zambrano, A. M. A., Asner, G. P., Field, C. B., Rosenheim, B. E., Kennedy-Bowdoin, T., Knapp, D. E., Knapp, D. E., Giardina, C. & Cordell, S. 2014. Linking rainforest ecophysiology and microclimate through fusion of airborne LiDAR and hyperspectral imagery. Ecosphere 5(5): 57. [*Cibotium glaucum*, Hawaii, leaf traits, modelling, remote sensing].
69. Brodersen, C., Jansen, S., Choat, B., Rico, C. & Pittermann, J. 2014. Cavitation resistance in seedless vascular plants: the structure and function of interconduit pit membranes. Plant Physiology 165(2): 895-904. [*Athyrium filix-femina*, conduits, *Psilotum nudum*, water transport].
70. Brouwer, P., Braeutigam, A., Kuelahoglu, C., Tazelaar, A. O. E., Kurz, S., Nierop, K. G. J., van der Werf, A., Weber, A. P. M. & Schluepmann, H. 2014. *Azolla* domestication towards a biobased economy? New Phytologist 202(3): 1069-1082. [*Azolla filiculoides*, *Azolla pinnata*].
71. Brownsey, P. J. & Perrie, L. R. 2014. Taxonomic notes on the New Zealand flora: recognition of two subspecies in *Dicksonia lanata*. New Zealand Journal of Botany 52(3): 343-351.
72. Brownsey, P. J. & Perrie, L. R. 2014. Taxonomic notes on the New Zealand flora: types in the fern family Psilotaceae. New Zealand Journal of Botany 52(2): 267-269. [*Bernhardia novaehollandiae*, *Psilotum heterocarpum*, *Tmesipteris fowerakeri*].
73. Brownsey, P. J. & Perrie, L. R. 2014. Taxonomic notes on the New Zealand flora: lectotypes in Marsileaceae and Salviniaceae (water ferns). New Zealand Journal of Botany 52(2): 270-271. [*Azolla pinnata*, *Azolla rubra*, *Pilularia novaehollandiae*, *Salvinia*].
74. Bruhn, D., Albert, K. R., Mikkelsen, T. N. & Ambus, P. 2014. UV-induced N_2O emission from plants. Atmospheric Environment 99: 206-214. [*Asplenium nidus*].
75. Bulfon, C., Volpatti, D. & Galeotti, M. 2014. *In vitro* antibacterial activity of plant ethanolic extracts against fish pathogens. Journal of the World Aquaculture Society 45(5): 545-557. [*Equisetum arvense*, medicinal plants].
76. Burrows, M. A., Fenner, J. & Haberle, S. G. 2014. Testing peat humification analysis in an Australian context: identifying wet shifts in regional climate over the past 4000 years. Mires and Peat 14: 5. [*Blechnum*, Holocene].
77. Bushart, T. J., Cannon, A., Clark, G. & Roux, S. J. 2014. Structure and function of CrACA1, the major PM-type Ca2+-ATPase, expressed at the peak of the gravity-directed trans-cell calcium current in spores of the fern *Ceratopteris richardii*. Plant Biology 16: 151-157. [space behavior].
78. Bystriakova, N., Ansell, S. W., Russell, S. J., Grundmann, M., Vogel, J. C. & Schneider, H. 2014. Present, past and future of the European rock fern *Asplenium fontanum*: combining distribution modelling and population genetics to study the effect of climate change on geographic range and genetic diversity. Annals of Botany 113(3): 453-465. [refugia].
79. Caceres, A., Michel, J. L., Doyle, B. J., Locklear, T. D. & Mahady, G. B. 2014. Estrogenic and progestagenic effects of medicinal plants used for women's reproductive health in Guatemala. 55th Annual Meeting of the American Society of Pharmacognosy (ASP), Oxford, MS, p. 758. [medicinal plants, *Phlebodium pseudoaureum*].
80. Cacharani, D. A., Ramos, M. & Martinez, O. G. 2014. Two new fern records from Northwestern Argentina. Darwiniana Nueva Serie 2(2): 277-283. [*Adiantum peruvianum*, *Serpocaulon polystichum*; Spanish].
81. Caluff, M. G. & Shelton, G. 2014. Two new species and a new hybrid species of *Selaginella* (Selaginellaceae) from W Cuba. Willdenowia 44(3): 311-319. [*Selaginella cavernaria*, *Selaginella dualis*, *Selaginella striata*].
82. Calvo, M. I. & Cavero, R. Y. 2014. Medicinal plants used for cardiovascular diseases in Navarra and their validation from official sources. Journal of Ethnopharmacology 157: 268-273. [*Equisetum telmateia*].
83. Campanella, J. J., Smalley, J. V. & Dempsey, M. E. 2014. A phylogenetic examination of the primary anthocyanin production pathway of the Plantae. Botanical Studies 55: 10.

84. Campos, N. V., Pereira, T. A. R., Machado, M. F., Guerra, M. B. B., Tolentino, G. S., Araujo, J. S., Rezende, M. Q., da Silva, M. C. N. A. & Schaefer, C. E. G. R. 2014. Evaluation of micro-energy dispersive x-ray fluorescence and histochemical tests for aluminium detection in plants from high altitude rocky complexes, southeast Brazil. Anais da Academia Brasileira de Ciencias 86(1): 285-296. [*Lycopodium clavatum*].
85. Campos, V., Souto, L. S., Medeiros, T. A. M., Toledo, S. P., Sayeg, I. J., Ramos, R. L. & Shinzato, M. C. 2014. Assessment of the removal capacity, tolerance, and anatomical adaptation of different plant species to benzene contamination. Water Air and Soil Pollution 225(8): 2033. [phytoremediation, *Pteris vittata*].
86. Canestraro, B. K., Moran, R. C. & Watkins, J. E., Jr. 2014. Reproductive and physiological ecology of climbing and terrestrial *Polybotrya* (Dryopteridaceae) at the La Selva Biological Station, Costa Rica. International Journal of Plant Sciences 175(4): 432-441. [*Polybotrya caudata*, *Polybotrya osmundacea*].
87. Caneva, G., Savo, V. & Kumbaric, A. 2014. Big messages in small details: nature in Roman archaeology. Economic Botany 68(1): 109-115. [*Pteridium aquilinum*].
88. Cao, J., Xia, X., Dai, X., Wang, Q. & Xiao, J. 2014. Chemical composition and bioactivities of flavonoids-rich extract from *Davallia cylindrica* Ching. Environmental Toxicology and Pharmacology 37(2): 571-579. [*Davallia cylindrica*].
89. Carpenter, D. N., Bockheim, J. G. & Reich, P. F. 2014. Soils of temperate rainforests of the North American Pacific Coast. Geoderma 230: 250-264. [*Blechnum spicant*].
90. Carvajal-Hernandez, C. I., Kroemer, T. & Vazquez-Torres, M. 2014. Species richness and floristic composition of ferns in humid montane forest and associated environments of central Veracruz, Mexico. Revista Mexicana de Biodiversidad 85(2): 491-501. [Spanish].
91. Cascales-Minana, B. & Meyer-Berthaud, B. 2014. Diversity dynamics of Zosterophyllopsida. Lethaia 47(2): 205-215. [Devonian, fossils, lycophytes].
92. Cash, B. M., Prevost, N., Wagner, F. F. & Comins, D. L. 2014. Studies toward the total synthesis of dihydrolycolucine. Preparation of AB and CEF ring fragments. Journal of Organic Chemistry 79(12): 5740-5745. [alkaloids, *Lycopodium lucidulum*].
93. Casimiro-Soriguer Solanas, F., Perez Latorre, A. V. & Cabezudo, B. 2014. Flora and vegetation of a unique suburban area: Mount San Antom (Malaga, Spain). Acta Botanica Malacitana 39: 179-205. [*Asplenium petrarchae*, *Polypodium cambricum*; Spanish].
94. Chaboureau, A. C., Sepulchre, P., Donnadieu, Y. & Franc, A. 2014. Tectonic-driven climate change and the diversification of angiosperms. Proceedings of the National Academy of Sciences of the United States of America 111(39): 14066-14070. [continental drift, evolution].
95. Chacon-Labella, J., De la Cruz, M., Vicuna, R., Tapia, K. & Escudero, A. 2014. Negative density dependence and environmental heterogeneity effects on tree ferns across succession in a tropical montane forest. Perspectives in Plant Ecology Evolution and Systematics 16(2): 52-63. [*Alsophila engelii*, *Cyathea caracasana*, Ecuador, plant communities, tree ferns].
96. Chae, L., Kim, T., Nilo-Poyanco, R. & Rhee, S. Y. 2014. Genomic signatures of specialized metabolism in plants. Science 344(6183): 510-513. [evolution, *Selaginella moellendorffii*].
97. Chaichana, R. & Sumpan, T. 2014. The potential ecological impact of the exotic snail *Pomacea canaliculata* on the Thai native snail *Pila scutata*. ScienceAsia 40(1): 11-15. [herbivory, *Salvinia cucullata*].
98. Chakraborti, K., Sadhukhan, R. & Bandyopadhyay, M. 2014. Potential ornamental ferns of gangetic West Bengal. National Conference on 'Modern Approaches to Pteridophytes: Biology, Biodiversity and Bioresources', CSIR-Institute of Himalayan Bioresource Technology, Palampur, p. 85-86.
99. Chandran, G. & Muralidhara. 2014. Insights on the neuromodulatory propensity of *Selaginella* (sanjeevani) and its potential pharmacological applications. CNS & Neurological Disorders-Drug Targets 13(1): 82-95. [biflavonoids, medicinal plants, *Selaginella delicatula*].

100. Chang, Y. F., Li, J., Lu, S. G. & Schneider, H. 2014. Systematic position and polyploid origin of the fern *Asplenium kiangsuense* (Aspleniaceae). Plant Diversity and Resources 36(1): 7-12. [Chinese].
101. Chang, Y. H., Chiou, W. L., Huang, Y. M., Shen, B. N., Lin, C. Y. & Hsu, T. C. 2014. New additions to the fern flora of Taiwan (2). Taiwan Journal of Biodiversity 16(3): 263-272.
102. Chao, Y. S., Rouhan, G., Amoroso, V. B. & Chiou, W. L. 2014. Molecular phylogeny and biogeography of the fern genus *Pteris* (Pteridaceae). Annals of Botany 114(1): 109-124.
103. Chappuis, E., Gacia, E. & Ballesteros, E. 2014. Environmental factors explaining the distribution and diversity of vascular aquatic macrophytes in a highly heterogeneous Mediterranean region. Aquatic Botany 113: 72-82. [*Isoetes echinospora*].
104. Charbonnier, S. 2014. Synthesis on the flora from the nodules of the Montceau-les-Mines Lagerstatte (Late Carboniferous, France). Annales de Paleontologie 100(2): 103-117. [fossils, tree ferns; French].
105. Chau, M. M. & Reyes, W. R. 2014. Effects of light, flooding, and weeding on experimental restoration of an endangered Hawaiian fern. Restoration Ecology 22(1): 107-116. [conservation, *Marsilea villosa*, weed control].
106. Cheema, H. K. 2014. Some comments on the paper "Natural apospory in *Pteris argyraea* T. Moore from South India". by Raju Antony, S M Shareef and N Mohanan in Indian Fern Journal 29: 148-152. Indian Fern Journal 31(1-2): 152-153.
107. Chen, B., Zheng, Z., Huang, K., Zheng, Y., Zhang, G., Zhang, Q. & Huang, X. 2014. Radionuclide dating of recent sediment and the validation of pollen-environment reconstruction in a small watershed reservoir in southeastern China. CATENA 115: 29-38. [*Dicranopteris*].
108. Chen, C. W., Ebihara, A., Chiou, W. L. & Li, C. W. 2014. *Haplopteris yakushimensis* (Pteridaceae, Vittarioideae), a new species from Yakushima Island, Japan. Phytotaxa 156(4): 229-234.
109. Chen, C. W., Ngan, L. T., Hidayat, A., Evangelista, L., Nooteboom, H. P. & Chiou, W. L. 2014. First insights into the evolutionary history of the *Davallia repens* complex. Blumea 59(1): 49-58. [apogamy, hybrids, polyploidy].
110. Chen, C. Y., Liaw, C. C., Chen, Y. H., Chang, W. Y., Chung, P. J. & Hwang, T. L. 2014. A novel immunomodulatory effect of ugonin U in human neutrophils via stimulation of phospholipase C. Free Radical Biology & Medicine 72: 222-231. [*Helminthostachys zeylanica*, medicinal plants].
111. Chen, G., Yang, B., Deng, T. & Xia, S. 2014. Progress in understanding several issues of the floristic geography of the pteridophytes in China. Acta Botanica Boreali Occidentalia Sinica 34(10): 2130-2136. [Chinese].
112. Chen, H., Hao, Z. Y., Wang, X. L., Zheng, X. K., Feng, W. S. & Wang, Y. Z. 2014. Sinensioside A, a new sesquilignan glycoside from *Selaginella sinensis*. Chinese Journal of Natural Medicines 12(2): 148-150. [medicinal plants].
113. Chen, J., Song, H., Ruan, J. & Lei, Y. 2014. Prostatic protective nature of the flavonoid-rich fraction from *Cyclosorus acuminatus* on carrageenan-induced non-bacterial prostatitis in rat. Pharmaceutical Biology 52(4): 491-497. [China, medicinal plants].
114. Chen, S., Song, F. & Chen, Y. 2014. Dynamic change of total flavonoids content in different parts of *Dicranopteris pedata* at different collection times. Journal of Plant Resources and Environment 23(4): 102-104. [Chinese].
115. Chen, W., Foy, N., Olthof, I., Zhang, Y., Fraser, R., Latifovic, R., Poitevin, J., Zorn, P. & McLennan, D. 2014. A biophysically based and objective satellite seasonality observation method for applications over the Arctic. International Journal of Remote Sensing 35(18): 6742-6763. [Canada, *Equisetum*, phenology, remote sensing].
116. Chen, X., Chan, W. L., Zhu, F. Y. & Lo, C. 2014. Phosphoproteomic analysis of the non-seed vascular plant model *Selaginella moellendorffii*. Proteome Science 12: 16.

117. Cheng, D., Zhang, Y., Gao, D. & Zhang, H. 2014. Antibacterial and anti-inflammatory activities of extract and fractions from *Pyrrosia petiolosa* (Christ et Bar.) Ching. Journal of Ethnopharmacology 155(2): 1300-1305.
118. Cheng, D., Zhang, Y., Xin, X. & Gao, D. 2014. Comparative pharmacognosy of *Pyrrosia petiolosa* and *Pyrrosia davidii*. Revista Brasileira de Farmacognosia-Brazilian Journal of Pharmacognosy 24(4): 368-380. [bronchitis, medicinal plants, nephritis].
119. Cho, H. J., Bae, W. J., Kim, S. J., Hong, S. H., Lee, J. Y., Hwang, T. K., Choi, Y. J., Hwang, S. Y. & Kim, S. W. 2014. The inhibitory effect of an ethanol extract of the spores of *Lygodium japonicum* on ethylene glycol-induced kidney calculi in rats. Urolithiasis 42(4): 309-315. [medicinal plants].
120. Choo, C. Y., Sahidan, N. & Latiff, A. 2014. Metabolic fingerprinting of the Lycopodiales species for chemotaxonomy and quality control. In: Jayprakasha, G. K., Patil, B. S. & Pellati, F. (eds.). Instrumental methods for the analysis and identification of bioactive molecules. American Chemical Society: Washington, D. C., pp. 353-360. [*Huperzia serrata*, Malaysia].
121. Choo, T. Y. S., Matos, F. B. & Moran, R. C. 2014. The gametophytes and young sporophytes of *Elaphoglossum decursivum* (Dryopteridaceae) in Costa Rica. American Fern Journal 104(2): 49-57.
122. Christenhusz, M. J. M. & Chase, M. 2014. Trends and concepts in fern classification. Annals of Botany 113(4): 571-594.
123. Christopoulou, A., Fyllas, N. M., Andriopoulos, P., Koutsias, N., Dimitrakopoulos, P. G. & Arianoutsou, M. 2014. Post-fire regeneration patterns of *Pinus nigra* in a recently burned area in Mount Taygetos, Southern Greece: The role of unburned forest patches. Forest Ecology and Management 327: 148-156. [fire ecology, *Pteridium aquilinum*, succession].
124. Cifuente, D. A., Vallejo, M. G., Ortega, M. G., Cabrera, J. L., Martin, V. S., Tonn, C. E., Agnese, A. M. & Ardanaz, C. E. 2014. Mass spectrometry studies of lycodine-type *Lycopodium* alkaloids: sauroxine and N-demethylsauroxine. Rapid Communications in Mass Spectrometry 28(24): 2690-2694. [*Huperzia saururus*].
125. Ciurli, A., Lenzi, L., Alpi, A. & Pardossi, A. 2014. Arsenic uptake and translocation by plants in pot and field experiments. International Journal of Phytoremediation 16: 804-823. [*Pteris vittata*].
126. Clauson-Kaas, F., Jensen, P. H., Jacobsen, O. S., Juhler, R. K. & Hansen, H. C. B. 2014. The naturally occurring carcinogen ptaquiloside is present in groundwater below bracken vegetation. Environmental Toxicology and Chemistry 33(5): 1030-1034. [ptaquiloside, *Pteridium aquilinum*].
127. Cleal, C. J. & Cascales-Minana, B. 2014. Composition and dynamics of the great Phanerozoic evolutionary floras. Lethaia 47(4): 469-484. [fossils].
128. Clericuzio, M., Burlando, B., Gandini, G., Tinello, S., Ranzato, E., Martinotti, S. & Cornara, L. 2014. Keratinocyte wound healing activity of galactoglycerolipids from the fern *Ophioglossum vulgatum* L. Journal of Natural Medicines 68(1): 31-37. [medicinal plants].
129. Cochran, A. T., Prado, J. & Schuettpelz, E. 2014. *Tryonia*, a new taenitidoid fern genus segregated from *Jamesonia* and *Eriosorus* (Pteridaceae). PhytoKeys 35: 23-43.
130. Cohen, M. F., Gurung, S., Fukuto, J. M. & Yamasaki, H. 2014. Controlled free radical attack in the apoplast: a hypothesis for roles of O, N and S species in regulatory and polysaccharide cleavage events during rapid abscission by *Azolla*. Plant Science 217: 120-126. [leaf abscission].
131. Contreras, S. A. & Lutz, A. I. 2014. First record of *Equisetites* sp. (Equisetaceae) in Quaternary sediments on the Bermejo River (Formosa, Argentina). Boletin de la Sociedad Argentina de Botanica 49(3): 381-392. [fossils; Spanish].
132. Corvez, A. & Grand, A. 2014. Enabling comparisons of characters using an Xper2 based knowledge-base of fern morphology. Phytotaxa 183(3): 145-158. [databases].

133. Cox, C. J., Li, B., Foster, P. G., Embley, T. M. & Civan, P. 2014. Conflicting phylogenies for early land plants are caused by composition biases among synonymous substitutions. Systematic Biology 63(2): 272-279. [*Equisetum*, *Huperzia*, *Isoetes*, *Psilotum*, *Selaginella*].
134. Crausbay, S., Genderjahn, S., Hotchkiss, S., Sachse, D., Kahmen, A. & Arndt, S. K. 2014. Vegetation dynamics at the upper reaches of a tropical montane forest are driven by disturbance over the past 7300 years. Arctic Antarctic and Alpine Research 46: 787-799. [*Cibotium*, fire ecology, indicator species, *Sadleria*].
135. Crawford, A. J. & Belcher, C. M. 2014. Charcoal morphometry for paleoecological analysis: the effects of fuel type and transportation on morphological parameters. Applications in Plant Sciences 2: 1400004. [charcoal, *Equisetum telmateia*, fire ecology, *Pteridium aquilinum*].
136. Creese, C., Oberbauer, S., Rundel, P. & Sack, L. 2014. Are fern stomatal responses to different stimuli coordinated? Testing responses to light, vapor pressure deficit, and CO_2 for diverse species grown under contrasting irradiances. New Phytologist 204(1): 92-104.
137. Cremers, G. & Boudrie, M. 2014. Pteridophyte taxa associated to a Plumier's plate and to a specimen from the Mascarene Islands - lectotypification of *Polypodium punctulatum* Poir. Adansonia 36(2): 171-183. [French].
138. Ctvrtlikova, M., Znachor, P. & Vrba, J. 2014. The effect of temperature on the phenology of germination of *Isoetes lacustris*. Preslia 86(3): 279-292.
139. Cuneo, N. R., Gandolfo, M. A., Zamaloa, M. C. & Hermsen, E. 2014. Late Cretaceous aquatic plant world in Patagonia, Argentina. PLoS One 9(8): e104749. [*Azolla*, fossils, *Regnellidium*, *Salvinia*].
140. Cuthbert, R. J., Cooper, J. & Ryan, P. G. 2014. Population trends and breeding success of albatrosses and giant petrels at Gough Island in the face of at-sea and on-land threats. Antarctic Science 26(2): 163-171. [birds, *Blechnum palmiforme*, habitat, *Histiopteris incisa*].
141. da Silva, I. A. A., Pereira, A. F. D. N. & Barros, I. C. L. 2014. Fragmentation and loss of habitat: consequences for the fern communities in Atlantic forest remnants in Alagoas, north-eastern Brazil. Plant Ecology & Diversity 7(4): 509-517.
142. Dai, X. L., Cao, J. G., Li, X. G. & Wang, Q. X. 2014. Ultrastructural observations on the formation of spore ornamentation in *Asplenium sarelii*. Bulletin of Botanical Research 34(2): 159-163. [Chinese].
143. Dai, X. L., Shen, Z. Y., Wang, J. & Ye, W. T. 2014. Comparative studies on gametophyte morphology and development of four species of Athyriaceae. Bulletin of Botanical Research 34(3): 317-321. [*Acystopteris japonica, Athyrium fimbriatum, Athyrium longius, Athyrium vidalii*; Chinese].
144. Dakskobler, I., Martincic, A. & Rojsek, D. 2014. Phytosociological analysis of communities with *Adiantum capillus-veneris* in the foothills of the Julian Alps (Western Slovenia). Hacquetia 13(2): 235-258.
145. Daoud-Bouattour, A., Bottollier-Curtet, M., Ferchichi-Ben Jamaa, H., Ghrabi-Gammar, Z., Ben Saad-Limam, S., Rhazi, L. & Muller, S. D. 2014. Effects of hydrology on recruitment of *Pilularia minuta* Durieu (Marsileaceae), an endangered plant of Mediterranean temporary pools. Aquatic Botany 112: 76-83.
146. Das, B., Dey, A., Das Talukdar, A., Nongalleima, K., Choudhury, M. D. & Deb, L. 2014. Antifertility efficacy of *Drynaria quercifolia* (L.) J. Smith on female Wister albino rats. Journal of Ethnopharmacology 153(2): 424-429.
147. Dauphin, B., Vieu, J. & Grant, J. R. 2014. Molecular phylogenetics supports widespread cryptic species in moonworts (*Botrychium* s.s., Ophioglossaceae). American Journal of Botany 101(1): 128-140.
148. Dauzart, A., Allen, C., Huskins, S. & Delahoussaye, J. 2014. A quantitative study of the vegetation surrounding populations of *Uvularia sessilifolia* (Colchicaceae) Fort Polk in west central Louisiana, USA. Journal of the Botanical Research Institute of Texas 8(1): 261-266. [competition, plant communities, *Woodwardia areolata*].

149. Davies, J., Arthur, D. & White, S. 2014. Effects of variation in breeding habitat on Ring Ouzel *Turdus torquatus* productivity and chick condition. Bird Study 61(2): 162-170. [birds, nesting habitat, *Pteridium*, UK].

150. de Albuquerque, L. P., Santana, G. M. D. S., Napoleao, T. H., Breitenbach Barroso Coelho, L. C., da Silva, M. V. & Guedes Paiva, P. M. 2014. Antifungal activity of *Microgramma vacciniifolia* rhizome lectin on genetically distinct *Fusarium oxysporum* f. sp. *lycopersici* races. Applied Biochemistry and Biotechnology 172(2): 1098-1105. [Deuteromycetes, medicinal plants].

151. de Araujo Goes-Neto, L. A. & Pietrobom, M. R. 2014. Cyatheales (Polypodiopsida) from the corredor de biodiversidade do norte do Para, Brazil. Hoehnea 41(3): 401-409. [*Metaxya*, tree ferns; Portuguese].

152. de Gasper, A. L., Vibrans, A. C., Funez, L. A., Rigon, M. J., Bittencourt, F. & Vieira, C. 2014. Dr. Roberto Miguel Klein Herbarium (FURB), Blumenau, Southern Brazil. PhytoKeys 42: 21-37.

153. de Haan, M., Cocquyt, C., Tice, A., Zahn, G. & Spiegel, F. W. 2014. First records of protosteloid amoebae (Eumycetozoa) from the Democratic Republic of the Congo. Plant Ecology and Evolution 147(1): 85-92. [host plants, *Microsorum punctatum*, substrate].

154. de Menezes Butakka, C. M., Trivinho-Strixino, S., Pinha, G. D. & Takeda, A. M. 2014. Emergence of Chironomidae (Insecta: Diptera) in a floodplain lake of the upper Parana river, Mato Grosso do Sul State, Brazil. Acta Scientiarum Biological Sciences 36(1): 51-58. [*Salvinia auriculata*].

155. de Novaes Pereira, A. F., da Silva, I. A. A., Santiago, A. C. & Barros, I. C. L.2014. Edge effects on fern community in an Atlantic Forest remnant (Bonito, Pernambuco, Brazil). Interciencia 39(4): 281-287. [Spanish].

156. de Oliveira, L. M., Ma, L. Q., Santos, J. A. G., Guilherme, L. R. G. & Lessl, J. T. 2014. Effects of arsenate, chromate, and sulfate on arsenic and chromium uptake and translocation by arsenic hyperaccumulator *Pteris vittata* L. Environmental Pollution 184: 187-192. [phytoremediation].

157. de Paiva, J. D. R. A., Matias, L. Q., Martins, F. R. & Becker, H. 2014. Does distance between aquatic plant assemblages matter in defining similarity between them during high water-level periods? Lakes & Reservoirs Research and Management 19(1): 37-45. [*Salvinia auriculata*].

158. de Souza, M. M., Pires, E. P., Elpino-Campos, A. & Cassa Louzada, J. N. 2014. Nesting of social wasps (Hymenoptera: Vespidae) in a riparian forest of Rio das Mortes in southeastern Brazil. Acta Scientiarum Biological Sciences 36(2): 189-196. [epiphytes].

159. de Vargas, I. B. & Droste, A. 2014. *In vitro* propagation of *Cyathea atrovirens* (Cyatheaceae): spore storage and sterilization conditions. Revista de Biologia Tropical 62(1): 299-308.

160. Degen de Arrua, R. & Gonzalez, Y. 2014. Plants used as anti-inflammatory in Paraguayan folk medicine. Boletin Latinoamericano y del Caribe de Plantas Medicinales y Aromaticas 13(3): 213-231. [ethnobotany; Spanish].

161. Deil, U. 2014. Rock communities and succulent vegetation in Northern Yemen (SW Arabia) - ecological, phytochorological and evolutionary aspects. Phytocoenologia 44: 193-234. [*Actiniopteris*, *Asplenium*, *Cheilanthes*, *Selaginella*].

162. Del Carmen Lavalle, M. & Rodriguezi, M. 2014. Spore morphology of *Elaphoglossum* (Dryopteridaceae) species from North-West Argentina. Boletin de la Sociedad Argentina de Botanica 49(3): 373-379. [Spanish].

163. Del Olmo-Ruiz, M. & Arnold, A. E. 2014. Interannual variation and host affiliations of endophytic fungi associated with ferns at La Selva, Costa Rica. Mycologia 106(1): 8-21. [ascomycetes, host plants].

164. Delahoussaye, J., Allen, C., Huskins, S. & Dauzart, A. 2014. A quantitative study of the vegetation surrounding populations of *Zigadenus densus* (Melianthiaceae) at Fort Polk in west Central Louisiana, USA. Journal of the Botanical Research Institute of Texas 8(1): 253-259. [competition, *Osmunda regalis*].

165. Deng, G., Li, M., Li, H., Yin, L. & Li, W. 2014. Exposure to cadmium causes declines in growth and photosynthesis in the endangered aquatic fern (*Ceratopteris pteridoides*). Aquatic Botany 112: 23-32. [China].
166. Devi, N. 2014. Conservation of bio-diversity of Subhankhata under Baska District, Manas Biosphere Reserve, Assam through community conservation programme. Advances in Plant Sciences 27(2): 387-390.
167. Devi, T. S. & Das, A. K. 2014. *Adiantum hispidulum* Swartz - a new report from Senapati District, Manipur. Indian Fern Journal 31(1-2): 40-45.
168. Diaz, F., Torreias, S. R. S., Spinelli, G. R. & Ronderos, M. M. 2014. A new species of *Dasyhelea* from Brazilian Amazonas and the description of the male of *D. paulistana* (Diptera: Ceratopogonidae). Acta Entomologica Musei Nationalis Pragae 54(2): 715-728. [*Azolla*, herbivory, *Salvinia*].
169. Ding, H. H., Chao, Y. S., Callado, J. R. & Dong, S. Y. 2014. Phylogeny and character evolution of the fern genus *Tectaria* (Tectariaceae) in the Old World inferred from chloroplast DNA sequences. Molecular Phylogenetics and Evolution 80: 66-78.
170. Ding, R., Fu, J. G., Xu, G. Q., Sun, B. F. & Lin, G. Q. 2014. Divergent total synthesis of the *Lycopodium* alkaloids huperzine A, huperzine B, and huperzine U. Journal of Organic Chemistry 79(1): 240-250. [alkaloids, *Huperzia serrata*, medicinal plants].
171. Ding, Y. M., Liu, Z. & Li, F. Q. 2014. Application of a sensitive and accurate LC-MS/MS method for determination of dryocrassin ABBA in rat plasma for a bioavailability study. Biomedical Chromatography 28(9): 1205-1211. [*Dryopteris crassirhizoma*, medicinal plants].
172. Dong, L. B., Wu, Y. N., Jiang, S. Z., Wu, X. D., He, J., Yang, Y. R. & Zhao, Q. S. 2014. Isolation and complete structural assignment of *Lycopodium* alkaloid cernupalhine A: theoretical prediction and total synthesis validation. Organic Letters 16(10): 2700-2703. [*Palhinhaea cernua*].
173. Dong, L. H., Fan, S. W., Ling, Q. Z., Huang, B. B. & Wei, Z. J. 2014. Identification of huperzine A-producing endophytic fungi isolated from *Huperzia serrata*. World Journal of Microbiology & Biotechnology 30(3): 1011-1017. [medicinal plants].
174. Dong, S. Y. 2014. Nomenclatural novelties in the fern genus *Tectaria* (Tectariaceae). Phytotaxa 178(3): 225-228.
175. dos Santos, V. V., Barros, I. C. L., Moura Junior, A. M., Severi, W. & Magalhaes, K. M. 2014. Freshwater ferns along a river basin in northeast Brazil. Neotropical Biology and Conservation 9(1): 42-48. [*Salvinia*; Portuguese].
176. Dou, L., Zhang, X., Pang, C., Song, M., Wei, H., Fan, S. & Yu, S. 2014. Genome-wide analysis of the WRKY gene family in cotton. MGG Molecular Genetics and Genomics 289(6): 1103-1121. [*Selaginella moellendorffii*].
177. Doucek, J. & Mikulas, R. 2014. Cambrian trace fossil *Zoophycos* from the Czech Republic. Geologica Carpathica 65(6): 403-409. [Lycopodiaceae].
178. Douglas, S. J. & Newton, A. C. 2014. Evaluation of Bayesian networks for modelling habitat suitability and management of a protected area. Journal for Nature Conservation 22(3): 235-246. [conservation, habitat, *Pilularia globulifera*].
179. Duan, J., Liu, Y., Zhang, C., Wei, X., Zong, Z., Yao, H. & Li, Y. 2014. Flavonoids from the Chinese fern *Polypodium hastatum* Thunb. and relevant antioxidative activity. Latin American Journal of Pharmacy 33(4): 696-700.
180. Duan, Y. F. & Zhang, L. B. 2014. *Megalastrum oppositum* and *Ctenitis canacae* (Dryopteridaceae): a new combination and a new synonym, respectively, for Mascarene fern flora. Phytotaxa 159(4): 295-297.
181. Duan, Y. F. & Zhang, L. B. 2014. Nomenclatural notes on *Tectaria blepharorachis* (comb. nov.) and *T. fibrillosa* (Tectariaceae; Pteridophyta) for Malagasy fern flora. Phytotaxa 162(2): 107-110. [Madagascar].

182. Dubal, K. & Kale, M. 2014. GC-MS profile of *Lygodium flexuosum* L. (Lygodiaceae) a medicinal fern from north Western Ghats. Indian Fern Journal 31(1-2): 112-117.
183. Dubuisson, J. Y., Hennequin, S. & Robert, Y. 2014. *Crepidomanes inopinatum* var. *tamonii* (Hymenophyllaceae), a new lowland variety endemic to semi-dry forests in La Reunion. Phytotaxa 173(2): 163-167. [La Reunion Island].
184. Dudani, S. N., Mahesh, M. K., Chandran, M. D. S. & Ramachandra, T. V. 2014. *Cyathea nilgirensis* Holttum (Cyatheaceae: Pteridophyta): a threatened tree fern from central Western Ghats, India. Journal of Threatened Taxa 6(1): 5413-5416.
185. Dyer, A. & Laue, B. 2014. The Fern Gazette is evolving. Pteridologist 6(1): 8-9.
186. Dyer, A. 2014. Patrick Neill Fraser - Victorian fern enthusiast. Pteridologist 6(1): 48-54.
187. Dyer, A. 2014. *Polystichum munitum*, the Bird's nest fern. Pteridologist 6(1): 60.
188. Dyer, A. 2014. The Buchanan fern, *Athyrium filix-femina* 'Victoriae' - the story of a Victorian fern variety. Pteridologist 6(1): 64-73.
189. Ebihara, A., Nakato, N., Matsumoto, S., Chao, Y. S. & Kuo, L. Y. 2014. Cytotaxonomic studies on thirteen ferns of Taiwan. Bulletin of the National Museum of Nature and Science, Series B, 40: 19-28.
190. Ebihara, A., Nakato, N., Saito, Y., Oka, T. & Minamitani, T. 2014. New records of *Asplenium varians* (Aspleniaceae) and two new hybrids in Japan. APG Acta Phytotaxonomica et Geobotanica 65(2): 53-65.
191. Edouard, M. J., Miao, L., Fan, G. W., Ojong, B. B. O., Zhen, H., Zhang, J., Gao, X. M. & Zhu, Y. 2014. Yang-tonifying traditional Chinese medicinal plants and their potential phytoandrogenic activity. Chinese Journal of Natural Medicines 12(5): 321-334. [*Cibotium*, *Drynaria*].
192. Eeckhout, S., Leroux, O., Willats, W. G. T., Popper, Z. A. & Viane, R. L. L. 2014. Comparative glycan profiling of *Ceratopteris richardii* 'C-Fern' gametophytes and sporophytes links cell-wall composition to functional specialization. Annals of Botany 114: 1295-1307.
193. Efendi, M., Chikmawati, T. & Darnaedi, D. 2014. New cytotypes of *Pteris ensiformis* var. *victoriae* from Indonesia. Reinwardtia 14(1): 133-135.
194. Ekman, J. 2014. Are swamp moonwort in Sweden? Svensk Botanisk Tidskrift 108(5): 228-231. [*Botrychium simplex*, *Botrychium tenebrosum*; Swedish].
195. Elliott, W. S. & Foster, J. D. 2014. Petrified wood of southwestern Oregon: Implications for Cenozoic climate change. Palaeogeography Palaeoclimatology Palaeoecology 402: 1-11. [*Cibotium oregonensis*, fossils, Oligocene].
196. Elliott-Kingston, C., Haworth, M. & McElwain, J. C. 2014. Damage structures in leaf epidermis and cuticle as an indicator of elevated atmospheric sulphur dioxide in early Mesozoic floras. Review of Palaeobotany & Palynology 208: 25-42. [microclimate, *Osmunda regalis*].
197. Erickson, H. E. & Perakis, S. S. 2014. Soil fluxes of methane, nitrous oxide, and nitric oxide from aggrading forests in coastal Oregon. Soil Biology & Biochemistry 76: 268-277. [*Polystichum munitum*].
198. Esaete, J., Eycott, A. E., Reinioe, J., Telford, R. J. & Vandvik, V. 2014. The seed and fern spore bank of a recovering African tropical forest. Biotropica 46(6): 677-686. [Uganda].
199. Evkaikina, A. I., Romanova, M. A. & Voitsekhovskaja, O. V. 2014. Evolutionary aspects of non-cell-autonomous regulation in vascular plants: structural background and models to study. Frontiers in Plant Science 5: 31. [*Ceratopteris richardii*, micro RNA, plasmodesmata, *Selaginella kraussiana*].
200. Ewald, J., Braun, L., Zeppenfeld, T., Jehl, H. & Heurich, M. 2014. Estimating the distribution of forage mass for ungulates from vegetation plots in Bavarian Forest National Park. Tuexenia (34): 53-70. [deer, Germany, herbivory].
201. Fabiani, A. C., Burry, L. S. & Escalante, A. H. 2014. Pollen and microalgae in sediments at southern margin of Colhue Huapi Lake, Chubut, Argentina. An insight to among shore

comparison. Anales del Instituto de la Patagonia 42(1): 35-51. [*Azolla*, fossils, Holocene, *Lycopodium clavatum*, spores].

202. Falinski, K. A., Yost, R. S., Sampaga, E. & Peard, J. 2014. Arsenic accumulation by edible aquatic macrophytes. Ecotoxicology and Environmental Safety 99: 74-81. [*Diplazium esculentum*, Hawaii].
203. Fang, X. M., Chen, F. S., Hu, X. F., Yuan, P. C., Li, J. & Chen, X. 2014. Aluminum and nutrient interplay across an age-chronosequence of tea plantations within a hilly red soil farm of subtropical China. Soil Science and Plant Nutrition 60(4): 448-459. [*Dicranopteris dichotoma*].
204. Farmer, E. E. 2014. Leaf defence. Oxford University Press: New York, NY. [herbivory, leaf traits, *Selaginella*].
205. Favas, P. J. C., Pratas, J., Varun, M., D'Souza, R. & Paul, M. S. 2014. Accumulation of uranium by aquatic plants in field conditions: prospects for phytoremediation. Science of the Total Environment 470: 993-1002. [*Azolla caroliniana*, phytoremediation, Portugal].
206. Fazalullah, A. U. & Ali, U. 2014. Pteridophytic flora of Maidan Valley Dir (L) Khyber Paichtunkhwa, Pakistan. International Journal of Biology and Biotechnology 11(4): 649-653.
207. Fedrigo, M., Kasel, S., Bennett, L. T., Roxburgh, S. H. & Nitschke, C. R. 2014. Carbon stocks in temperate forests of south-eastern Australia reflect large tree distribution and edaphic conditions. Forest Ecology and Management 334: 129-143. [tree ferns].
208. Feher, A., Halmova, D. & Koncekova, L. 2014. Evaluation of biodiversity of ground flora in short rotation coppice: positive and negative externalities. In: Hoffman, C., Baxter, D., Maniatis, K., Grassi, A. & Helm, P. (eds.). Papers of the 22nd European Biomass Conference: setting the course for a biobased economy. ETA Florence: Florence, Italy, pp. 342-345. [*Equisetum arvense*, land management, Slovakia, weedy plants].
209. Feng, T., Lin, H., Guo, Q. & Feng, Y. 2014. Influence of an arsenate-reducing and polycyclic aromatic hydrocarbons-degrading *Pseudomonas* isolate on growth and arsenic accumulation in *Pteris vittata* and removal of phenanthrene. International Biodeterioration & Biodegradation 94: 12-18.
210. Feng, T., Lin, H., Tang, J. & Feng, Y. 2014. Characterization of polycyclic aromatic hydrocarbons degradation and arsenate reduction by a versatile *Pseudomonas* isolate. International Biodeterioration & Biodegradation 90: 79-87. [*Pteris vittata*].
211. Ferchichi-Ben Jamaa, H., Muller, S. D., Ghrabi-Gammar, Z., Rhazi, L., Soulie-Maersche, I., Gammar, A. M., Ouali, M., Ben Saad-Limam, S. & Daoud-Bouattour, A. 2014. Influence of grazing on structure, composition and dynamics of vegetation in Mediterranean temporary pools (northern Tunisia). Revue d Ecologie 69(42097): 196-213. [*Pilularia minuta*; French].
212. Ferlian, O., Cesarz, S., Marhan, S. & Scheu, S. 2014. Carbon food resources of earthworms of different ecological groups as indicated by C-13 compound-specific stable isotope analysis. Soil Biology & Biochemistry 77: 22-30. [*Dryopteris dilatata*].
213. Fernandes, R. S., Yesilyurt, J. C. & Salino, A. 2014. New species and combinations in *Meniscium* (Thelypteridaceae). Phytotaxa 184(1): 1-11.
214. Ferreira de Sant'Ana, F. J., Reis Junior, J. L., Freitas Neto, A. P., Moreira Junior, C. A., Scalla Vulcani, V. A., Rabelo, R. E. & Terra, J. P. 2014. Toxic plants for ruminants in Southwestern Goias, Brazil. Ciencia Rural 44(5): 865-871. [*Pteridium aquilinum*; Portuguese].
215. Ferroni, L., Angeleri, M., Pantaleoni, L., Pagliano, C., Longoni, P., Marsano, F., Aro, E. M., Aro, E. M., Baldisserotto, C., Giovanardi, M., Cella, R. & Pancaldi, S. 2014. Light-dependent reversible phosphorylation of the minor photosystem II antenna Lhcb6 (CP24) occurs in lycophytes. Plant Journal 77(6): 893-905. [*Adiantum capillus-veneris*, *Lycopodium squarrosum*, *Platycerium grande*, *Selaginella martensii*].
216. FitzJohn, R. G., Pennell, M. W., Zanne, A. E., Stevens, P. F., Tank, D. C. & Cornwell, W. K. 2014. How much of the world is woody? Journal of Ecology 102(5): 1266-1272. [Cyatheaceae, morphology, tree ferns].

217. Fletcher, M. 2014. The dead of winter? Keeping tree ferns alive in the U. K. Pteridologist 6(1): 46-47. [frost damage, frost tolerance, horticulture, UK].
218. Fletcher, T. L., Greenwood, D. R., Moss, P. T. & Salisbury, S. W. 2014. Paleoclimate of the late Cretaceous (Cenomanian-Turonian) portion of the Winton formation, Central-Western Queensland, Australia: new observations based on clamp and bioclimatic analysis. Palaios 29(3): 121-128. [*Equisetum*, fossils].
219. Flexas, J., Carriqui, M., Coopman, R. E., Gago, J., Galmes, J., Martorell, S., Morales, F. & Diaz-Espejo, A. 2014. Stomatal and mesophyll conductances to CO_2 in different plant groups: Underrated factors for predicting leaf photosynthesis responses to climate change? Plant Science 226: 41-48.
220. Flinn, K. M., Loiacono, M. M. & Groff, H. E. 2014. Low reproductive success of hay-scented fern (*Dennstaedtia punctilobula*) regardless of inbreeding level or time since disturbance. Botany 92(12): 911-915.
221. Floyd, S. K., Ryan, J. G., Conway, S. J., Brenner, E., Burris, K. P., Burris, J. N., Chen, T., Chen, T., Graham, S. W., Leebens-Mack, J., Pires, J. C., Rothfels, C. J., Sigel, E. M., Stevenson, D. W., Stewart, C. N., Jr., Wong, G. K. S. & Bowman, J. L. 2014. Origin of a novel regulatory module by duplication and degeneration of an ancient plant transcription factor. Molecular Phylogenetics and Evolution 81: 159-173.
222. Forzza, R. C., Pifano, D. S., Oliveira Filho, A. T., Meireles, L., Faria, P. L., Salimena, F. R., Mynssen, C. M. & Prado, J. 2014. Flora vascular da Reserva Biológica da Represa do Grama, Minas Gerais, e sua relação florística com outras florestas do sudeste brasileiro. Rodriguesia 65: 275-292. [Portuguese].
223. Franca, M. C., Francisquini, M. I., Cohen, M. C. L. & Pessenda, L. C. R. 2014. Inter-proxy evidence for the development of the Amazonian mangroves during the Holocene. Vegetation History and Archaeobotany 23(5): 527-542. [*Acrostichum aureum*, fossils].
224. Fraser, W. T., Watson, J. S., Sephton, M. A., Lomax, B. H., Harrington, G., Gosling, W. D. & Self, S. 2014. Changes in spore chemistry and appearance with increasing maturity. Review of Palaeobotany & Palynology 201: 41-46. [Carboniferous, fossils, *Lycopodium clavatum*, Mississippian, sporopollenin, UK].
225. Frerker, K., Sabo, A. & Waller, D. 2014. Long-term regional shifts in plant community composition are largely explained by local deer impact experiments. PLoS One 9(12): e115843. [herbivory].
226. Friel, C. E., Finkelstein, S. A. & Davis, A. M. 2014. Relative importance of hydrological and climatic controls on Holocene paleoenvironments inferred using diatom and pollen records from a lake in the central Hudson Bay Lowlands, Canada. Holocene 24(3): 295-306. [*Equisetum*, fossils, spores].
227. Fu, R. H., Wang, Y. C., Liu, S. P., Shih, T. R., Lin, H. L., Chen, Y. M., Tsai, R. T., Shyu, W. C. & Lin, S. Z. 2014. Dryocrassin suppresses immunostimulatory function of dendritic cells and prolongs skin allograft survival. Cell Transplantation 23(42128): 641-656. [*Dryopteris crassirhizoma*, medicinal plants].
228. Fuentes, I. I., Espadas-Gil, F., Talavera-May, C., Fuentes, G. & Santamaria, J. M. 2014. Capacity of the aquatic fern (*Salvinia minima* Baker) to accumulate high concentrations of nickel in its tissues, and its effect on plant physiological processes. Aquatic Toxicology (Amsterdam) 155: 142-150.
229. Fujiwara, A. U., Kitajima, J., Iwashina, T., Matsumoto, S. & Watano, Y. 2014. Genkwanin 4'-O-glucosyl-(1-2)-rhamnoside from new chemotype of *Asplenium normale* in Japan. Natural Product Communications 9: 1-2.
230. Furlan, F. H., da Costa, F. L., Torres, S. C. S., Jr., Kerber, F. L., Damasceno, E. D. S., Salino, A. & Riet-Correa, F. 2014. Profile of farms with pastures invaded by *Pteridium arachnoideum* in northern Mato Grosso and prevalence of bovine enzootic hematuria. Pesquisa Veterinaria Brasileira 34(8): 753-759. [Portuguese].

231. Furlan, F. H., Mendes, E. R. S., Ducatti, K. R., Marcon, G. C., Dombrosky, T., Amorim, T. M. & Riet-Correa 2014. Acute poisoning by *Pteridium arachnoideum* and *Pteridium caudatum* in cattle and distribution of the plants in Mato Grosso. Pesquisa Veterinaria Brasileira 34(4): 343-348. [Portuguese].
232. Gabarayeva, N. I. 2014. Role of genetic control and self-assembly in gametophyte sporoderm ontogeny: Hypotheses and experiment. Russian Journal of Developmental Biology 45(4): 177-195. [*Alsophila setosa*].
233. Gairola, S., Sharma, J. & Bedi, Y. S. 2014. A cross-cultural analysis of Jammu, Kashmir and Ladakh (India) medicinal plant use. Journal of Ethnopharmacology 155(2): 925-986.
234. Galbraith, J. A., Clout, M. N. & Hauber, M. E. 2014. Nest-site use by an introduced parrot in New Zealand. Emu 114(2): 97-105. [tree ferns].
235. Gallegos, S. C., Hensen, I. & Schleuning, M. 2014. Secondary dispersal by ants promotes forest regeneration after deforestation. Journal of Ecology 102(3): 659-666. [Bolivia, *Pteridium arachnoideum*].
236. Galtier, J. & Phillips, T. L. 2014. Evolutionary and ecological perspectives of late Paleozoic ferns. Part III. Anachoropterid ferns (including *Anachoropteris, Tubicaulis*, the Sermayaceae, Kaplanopteridaceae and Psalixochlaenaceae). Review of Palaeobotany & Palynology 205: 31-73. [fossils].
237. Ganem, M. A., Arana, M. D., Luna, M. L., Ahumada, O. & Giudice, G. E. 2014. First record of *Asplenium harpeodes* (Aspleniaceae) for the Argentinian flora. Darwiniana Nueva Serie 2(2): 237-242. [Spanish].
238. Garces Cea, M., Claverol, S., Alvear Castillo, C., Rabert Pinilla, C. & Bravo Ramirez, L. 2014. Desiccation tolerance of Hymenophyllaceae filmy ferns is mediated by constitutive and non-inducible cellular mechanisms. Comptes Rendus Biologies 337(4): 235-243.
239. Gast, P., Broeren, F. G. J., Sottini, S., Aoki, R., Takashina, A., Yamaguchi, T., Kohzuma, T. & Groenen, E. J. J. 2014. The type 1 copper site of pseudoazurin: axial and rhombic. Journal of Inorganic Biochemistry 137: 57-63. [*Dryopteris crassirhizoma*, plastocyanin].
240. Gechev, T. S., Hille, J., Woerdenbag, H. J., Benina, M., Mehterov, N., Toneva, V., Fernie, A. R. & Mueller-Roeber, B. 2014. Natural products from resurrection plants: Potential for medical applications. Biotechnology Advances 32: 1091-1101. [desiccation tolerance, medicinal plants, *Selaginella tamariscina*].
241. Gerrienne, P., Meyer-Berthaud, B., Yang, N., Steemans, P. & Li, C. S. 2014. *Planatophyton* gen. nov., a late Early or Middle Devonian euphyllophyte from Xinjiang, North-West China. Review of Palaeobotany & Palynology 208: 55-64.
242. Ghazali, S. Z., Md-Zain, B. M., Maideen, H., Maimon, A. & Yaakop, S. 2014. A first record of gregarious moth pest, *Herpetogramma platycapna* (Meyrick) of fern species, *Angiopteris evecta* (G. Forst.) Hoffm. from Malaysia. Malaysian Applied Biology 43(2): 105-109.
243. Ghosh, D. K. & Chakraborti, K. 2014. Performance of *Azolla pinnata* and its effect on turmeric cultivation in red lateritic zone of West Bengal. National Conference on 'Modern Approaches to Pteridophytes: Biology, Biodiversity and Bioresources', CSIR-Institute of Himalayan Bioresource Technology, Palampur, p. 90-91.
244. Giacosa, J. P. R., Giudice, G. E., Pipo, L. & Luna, M. L. 2014. Spore morphology, gametophyte development and conservation of *Thelypteris abbiattii* and *T. hispidula* (Thelypteridaceae) in Punta Lara Natural Reserve, Buenos Aires. Boletin de la Sociedad Argentina de Botanica 49(2): 217-226. [Spanish].
245. Gibby, M. 2014. Dr Jacobus P. Roux 1954-2013 OBITUARY. Fern Gazette 19: 272-274.
246. Gil da Costa, R. M., Oliveira, P. A., Bastos, M. M. S. M., Lopes, C. C. & Lopes, C. 2014. Ptaquiloside-induced early-stage urothelial lesions show increased cell proliferation and intact Beta-catenin and E-cadherin expression. Environmental Toxicology 29(7): 763-769. [*Pteridium aquilinum*].

247. Girdhar, M., Sharma, N. R., Rehman, H., Kumar, A. & Mohan, A. 2014. Comparative assessment for hyperaccumulatory and phytoremediation capability of three wild weeds. 3 Biotech 4(6): 579-589. [*Pteris vittata*].
248. Gleicher, S. C., Chamecki, M., Isard, S. A., Pan, Y. & Katul, G. G. 2014. Interpreting three-dimensional spore concentration measurements and escape fraction in a crop canopy using a coupled Eulerian-Lagrangian stochastic model. Agricultural and Forest Meteorology 194: 118-131. [*Lycopodium*, spore dispersal].
249. Goetz, A. E. & Ruckwied, K. 2014. Palynological records of the early Permian postglacial climate amelioration (Karoo Basin, South Africa). Palaeobiodiversity Palaeoenvironments 94(2): 229-235.
250. Gola, E. M. 2014. Dichotomous branching: the plant form and integrity upon the apical meristem bifurcation. Frontiers in Plant Science 5: 263. [*Selaginella kraussiana*].
251. Golokhvast, K. S., Seryodkin, I. V., Chaika, V. V., Zakharenko, A. M. & Pamirsky, I. E. 2014. Phytoliths in taxonomy of phylogenetic domains of plants. Biomed Research International : 648326. [*Equisetum*].
252. Gomez-Noguez, F., Perez-Garcia, B., Mendoza-Ruiz, A. & Orozco-Segovia, A. 2014. A pluviometric fern spore, fungal spore, and pollen trap. American Fern Journal 104(1): 1-6. [spore dispersal, spore trap].
253. Gomez-Rey, M. X., Garcia-Marco, S., Fernandez, C., Couto-Vazquez, A. & Gonzalez-Prieto, S. J. 2014. Effects of post-fire soil stabilisation techniques on trace elements lost by erosion. International Journal of Wildland Fire 23(1): 93-103. [*Pteridium aquilinum*, Spain].
254. Gomez-Zurita, J. & Cardoso, A. 2014. Systematics of the New Caledonian endemic genus *Taophila* Heller (Coleoptera: Chrysomelidae, Eumolpinae) combining morphological, molecular and ecological data, with description of two new species. Systematic Entomology 39(1): 111-126. [herbivory].
255. Goncharov, A. A., Khramova, E. Y. & Tiunov, A. V. 2014. Spatial variations in the trophic structure of soil animal communities in boreal forests of Pechora-Ilych nature reserve. Eurasian Soil Science 47(5): 441-448. [*Dryopteris dilatata*, Russia].
256. Gonzalez-Jurado, G. 2014. A low-altitude new location for *Equisetum palustre* L. (Equisetales: Equisetaceae) in Jaen province (Spain). Anales de Biologia 36: 19-21.
257. Gonzalez-Orozco, C. E., Ebach, M. C., Laffan, S., Thornhill, A. H., Knerr, N. J., Schmidt-Lebuhn, A. N., Cargill, C. C., Cargill, C. C., Nagalingum, N. S., Mishler, B. D. & Miller, J. T. 2014. Quantifying phytogeographical regions of Australia using geospatial turnover in species composition. PLoS One 9(3): e92558.
258. Gonzalez-Roman, R. D., Lopez-Victoria, M. & Silverstone-Sopkin, P. A. 2014. Terrestrial flora of Malpelo Island, Colombia, eastern tropical Pacific. Revista de Biologia Tropical 62(1): 327-336. [floristics, *Pityrogramma calomelanos*, *Pityrogramma dealbata*; Spanish].
259. Goswami, H. K. 2014. *Helminthostachys zeylanica* populations need serious attention: disclosures from unpublished observations. Indian Fern Journal 31(1-2): 132-135.
260. Goswami, H. K. 2014. Heterosporangium: a new category of sporangium in Lycopsida. Acta Botanica Hungarica 56(42036): 77-92. [*Isoetes pantii*].
261. Goutam, J., Sharma, V. K., Verma, S. K., Singh, D. K., Kumar, J., Mishra, A., Kumar, A. & Kharwar, R. N. 2014. Optimization of culture conditions for enhanced production of bioactive metabolites rich in antimicrobial and antioxidant activities isolated from *Emericella quadrilineata* an endophyte of *Pteris pellucida*. Journal of Pure and Applied Microbiology 8(3): 2059-2073.
262. Grabovskaya-Borodina, A. E., Illarionova, I. D. & Yang, T. Y. A. 2014. Collection of S. Yano's specimens from Taiwan in the Herbarium of the Komarov Botanical Institute (LE). Taiwania 59(2): 164-189. [Russia].

263. Gramzow, L., Weilandt, L. & Theissen, G. 2014. MADS goes genomic in conifers: towards determining the ancestral set of MADS-box genes in seed plants. Annals of Botany 114(7): 1407-1429. [*Selaginella moellendorffii*].

264. Grandova, M. A. 2014. Aquatic Heteroptera of great rivers of the Ukrainian steppe zone and seasonal changes of abundance and biomass. Vestnik Zoologii 48(5): 441-450. [*Salvinia natans*].

265. Green, W. A. 2014. The Parichnos problem and the function of aerenchyma in the Lycopsida. Bulletin of the Peabody Museum of Natural History 55(2): 191-200.

266. Grodowitz, M. J., Johnson, S. & Schad, A. N. 2014. Efficiency of sampling to determine population size of *Cyrtobagous salviniae* (Coleoptera: Curculionidae). Florida Entomologist 97(3): 1213-1225. [biological control, herbivory, Louisiana, *Salvinia*].

267. Grusz, A. L., Windham, M. D., Yatskievych, G., Huiet, L., Gastony, G. J. & Pryer, K. M. 2014. Patterns of diversification in the xeric-adapted fern genus *Myriopteris* (Pteridaceae). Systematic Botany 39(3): 698-714. [*Cheilanthes*].

268. Guatimosim, E., Pinto, H. J., Barreto, R. W. & Prado, J. 2014. *Rhagadolobiopsis*, a new genus of Parmulariaceae from Brazil with a description of the ontogeny of its ascomata. Mycologia 106(2): 276-281. [ascomycetes, *Rhagadolobiopsis thelypteridis*, *Thelypteris serrata*].

269. Gunther, K. A., Shoemaker, R. R., Frey, K. L., Haroldson, M. A., Cain, S. L., van Mame, F. T. & Fortin, J. K. 2014. Dietary breadth of grizzly bears in the Greater Yellowstone Ecosystem. Ursus 25(1): 61-73. [*Equisetum*, herbivory].

270. Guo, Y. D., Cao, J. G., Dai, X. L. & Wang, Q. X. 2014. Gametophyte development and apogamy of the fern *Cheilosoria chusana*. Bulletin of Botanical Research 34(3): 322-327. [Chinese].

271. Guo, Y. D., Cao, J. G., Li, X. G. & Wang, Q. X. 2014. Development of gametophyte and oogenesis of the fern *Lygodium japonicum*. Bulletin of Botanical Research 34(2): 164-169. [Chinese].

272. Guo, Y. D., Wang, Q. X., Li, B. G. & Cao, J. G. 2014. Studies on the development of gametophyte and oogenesis of the fern *Microlepia platyphylla*. Plant Diversity and Resources 36(6): 747-754. [Chinese].

273. Gupta, S., Hore, M. & Biswas, S. 2014. An overview of the study of soil spore bank of ferns: need for suitable exploitation in India. Proceedings of the Indian National Science Academy Part B Biological Sciences 84(3): 779-798.

274. Gureyeva, I. I. 2014. Peculiarities of biomorphology of the *Matteuccia struthiopteris* (L.) Tod. sporophyte. Modern Phytomorphology 5: 135-142. [Russian, English summary].

275. Gureyeva, I. I., Kreshchenok, I. A. & Kuznetsov, A. A. 2014. Rare ferns of the Amur region (Russia). Bioscience Biotechnology Research Asia 11: 269-275. [conservation].

276. Gureyeva, I. I., Romanova, S. B. & Page, C. N. 2014. Morphological features of the frond pinnulets of *Pteridium* taxa. Proceedings of the International Scientific Conference "Introduction, conservation and monitoring of plant diversity", Kiev, p. 172-173. [Russian, English summary].

277. Gurung, S., Cohen, M. F. & Yamasaki, H. 2014. Azide-dependent nitric oxide emission from the water fern *Azolla pinnata*. Russian Journal of Plant Physiology 61(4): 543-547.

278. Guterres-Pazin, M. G., Marmontel, M., Rosas, F. C. W., Pazin, V. F. V. & Venticinque, E. M. 2014. Feeding ecology of the Amazonian manatee (*Trichechus inunguis*) in the Mamiraua and Amana sustainable development reserves, Brazil. Aquatic Mammals 40(2): 139-149. [*Azolla caroliniana*, herbivory].

279. Gutierrez, J. & Solano, E. 2014. Floristic and phytogeographical affinities of the vegetation in the municipality of San Jose Iturbide, Guanajuato, Mexico. Acta Botanica Mexicana 107: 27-65. [*Osmunda regalis*; Spanish].

280. Gutierrez, M. F. & Paggi, J. C. 2014. Chemical repellency and adverse effects of free-floating macrophytes on the cladoceran *Ceriodaphnia dubia* under two temperature levels. Limnology 15(1): 37-45. [*Salvinia biloba*, zooplankton].
281. Hanley, T. A., Gillingham, M. P. & Parker, K. L. 2014. Composition of diets selected by Sitka black-tailed deer on Channel Island, central southeast Alaska. U S Forest Service Pacific Northwest Research Station Research Note PNW-RN (570): 1-21. [*Dryopteris expansa*, herbivory].
282. Hanusova, K., Ekrt, L., Vit, P., Kolar, F. & Urfus, T. 2014. Continuous morphological variation correlated with genome size indicates frequent introgressive hybridization among *Diphasiastrum* species (Lycopodiaceae) in Central Europe. PLoS One 9(6): e99552. [flow cytometry, morphometry].
283. Haratym, W., Weryszko-Chmielewska, E. & Dmitruk, M. 2014. An analysis of the content of Pteridophyta spores in aeroplankton of Lublin (2013-2014). Acta Agrobotanica 67(3): 21-27. [aerobiology, allergies, Poland, spore dispersal].
284. Haufler, C. H. 2014. Ever since Klekowski: testing a set of radical hypotheses revives the genetics of ferns and lycophytes. American Journal of Botany 101(12): 2036-2042. [chromosomes].
285. Hayes, P. A. & Collinson, M. E. 2014. The flora of the insect limestone (latest Eocene) from the Isle of Wight, southern England. Earth and Environmental Science Transactions of the Royal Society of Edinburgh 104(42097): 245-261. [*Acrostichum*, *Azolla*, fossils, UK].
286. Hayward, M. 2014. A fan of Jamaican ferns. Pteridologist 6(1): 19.
287. Heery, S., Moorkens, E. & Campbell, C. 2014. An account of tufa-forming (petrifying) spring habitats in the Slieve Bloom Mountains, Ireland. Biology and Environment (1): 1-11. [*Equisetum telmateia*].
288. Hellquist, C. E., Hellquist, C. B. & Whipple, J. J. 2014. New records for rare and under-collected aquatic vascular plants of Yellowstone National Park. Madrono 61(2): 159-176. [conservation, floristics, *Isoetes echinospora*, Montana, Wyoming].
289. Henares, M. N. P. & Camargo, A. F. M. 2014. Treatment efficiency of effluent prawn culture by wetland with floating aquatic macrophytes arranged in series. Brazilian Journal of Biology 74(4): 906-912. [*Salvinia molesta*, wastewater treatment].
290. Hennequin, S., Kessler, M., Lindsay, S. & Schneider, H. 2014. Evolutionary patterns in the assembly of fern diversity on the oceanic Mascarene Islands. Journal of Biogeography 41(9): 1651-1663. [*Ctenitis*, island biogeography].
291. Henry, T. A., Bainard, J. D. & Newmaster, S. G. 2014. Genome size evolution in Ontario ferns (Polypodiidae): evolutionary correlations with cell size, spore size, and habitat type and an absence of genome downsizing. Genome 57(10): 555-566. [Canada, phenotypes, polyploidy].
292. Hermsen, E. J., Gandolfo, M. A. & Ruben Cuneo, N. 2014. New marsileaceous fossils from the late Cretaceous of South America and a reevaluation of *Marsileaceaephyllum*. Plant Systematics and Evolution 300(2): 369-386. [aquatic plants, Argentina, Cretaceous, Chubut, fossils, spores].
293. Hernandez-Cardenas, R. A., Cerros-Tlatatilpa, R. & Flores-Morarales, A. 2014. Vascular plants and vegetation of the Tepecapa gully in the municipality of Tlayacapan, Morelos, Mexico. Acta Botanica Mexicana 108: 11-38. [*Selaginella basipilosa*, *Selaginella hoffmanii*; Spanish].
294. Hernandez-Hernandez, V., Segovia-Ramirez, M. G. & Arguelles-Marmolejo, S. 2014. A new record for Guanajuato: *Psilotum nudum* (Psilotaceae). Revista Mexicana de Biodiversidad 85(2): 610-612. [*Psilotum nudum*; Spanish].
295. Hettiarachchi, N., Kryukov, K., Sumiyama, K. & Saitou, N. 2014. Lineage-specific conserved noncoding sequences of plant genomes: their possible role in nucleosome positioning. Genome Biology and Evolution 6(9): 2527-2542. [*Selaginella moellendorffii*].
296. Higa, T., Suetsugu, N. & Wada, M. 2014. Plant nuclear photorelocation movement. Journal of Experimental Botany 65: 2873-2881. [*Adiantum capillus-veneris*].

297. Higo, M., Isobe, K., Drijber, R. A., Kondo, T., Yamaguchi, M., Takeyama, S., Suzuki, Y., Suzuki, Y., Matsuda, Y., Ishii, R. & Torigoe, Y. 2014. Impact of a 5-year winter cover crop rotational system on the molecular diversity of arbuscular mycorrhizal fungi colonizing roots of subsequent soybean. Biology and Fertility of Soils 50(6): 913-926. [*Equisetum arvense*, Japan].
298. Hines, H. B. 2014. Kroombit Tops: endemism and outliers. Queensland Naturalist 52(42064): 4-31. [Australia, *Blechnum wattsii*, conservation].
299. Hirai, R. Y. & Prado, J. 2014. Cryptogams of Parque Estadual das Fontes do Ipiranga, Sao Paulo, Sao Paulo State, Brazil. Pteridophyta: 3. Cyatheaceae. Hoehnea 41(2): 173-180. [*Cyathea corcovadensis, Cyathea delgadii*, tree ferns; Portuguese].
300. Hirai, R. Y., Sundue, M. A. & Prado, J. 2014. *Adiantum alan-smithii* (Pteridaceae), a new maidenhair fern from Chiapas, Mexico. Systematic Botany 39(2): 380-383.
301. Hirano, T., Kusin, K., Limin, S. & Osaki, M. 2014. Carbon dioxide emissions through oxidative peat decomposition on a burnt tropical peatland. Global Change Biology 20(2): 555-565. [*Blechnum*, fire ecology, Indonesia, Kalimantan, *Lygodium*, *Stenochlaena*].
302. Hirasawa, Y., Kato, Y., Wong, C. P., Uchiyama, N., Goda, Y., Hadi, A. H. A., Ali, H. M. & Morita, H. 2014. Hupermine A, a novel C16N2-type *Lycopodium* alkaloid from *Huperzia phlegmaria*. Tetrahedron Letters 55(11): 1902-1904. [medicinal plants].
303. Hirata, R., Takagi, K., Ito, A., Hirano, T. & Saigusa, N. 2014. The impact of climate variation and disturbances on the carbon balance of forests in Hokkaido, Japan. Biogeosciences 11(18): 5139-5154. [climate change, *Dryopteris austriaca*, *Dryopteris crassirhizoma*, Japan].
304. Hirayama, Y., Okuzumi, K., Masubuti, H., Uekusa, H., Girault, J. P. & Fujimoto, Y. 2014. Stereochemical assignment of C-24 and C-25 of amarasterone A, a putative biosynthetic intermediate of cyasterone. Journal of Organic Chemistry 79(12): 5471-5477. [*Microsorum scolopendria*].
305. Hori, K., Tono, A., Fujimoto, K., Kato, J., Ebihara, A., Watano, Y. & Murakami, N. 2014. Reticulate evolution in the apogamous *Dryopteris varia* complex (Dryopteridaceae, subg. Erythrovariae, sect. Variae) and its related sexual species in Japan. Journal of Plant Research 127(6): 661-684.
306. Horton, R. 2014. A role for instant porridge in pteridoculture. Pteridologist 6(1): 13. [horticulture, propagation].
307. Hsu, R. C. C., Oostermeijer, J. G. B. & Wolf, J. H. D. 2014. Adaptation of a widespread epiphytic fern to simulated climate change conditions. Plant Ecology 215(8): 889-897. [*Asplenium antiquum*].
308. Hsu, T. C., Lin, C. Y. & Chang, Y. H. 2014. New additions to the fern flora of Taiwan. Taiwania 59(1): 86-92. [new records, new species, *Polystichum chunii*, *Polystichum tenuius*].
309. Hsu, T. C., Lin, C. Y., Chen, C. W., Chiou, W. L. & Chang, Y. H. 2014. Confirmation of the occurrence and distribution of three fern species in Taiwan. Taiwan Journal of Forest Science 29(2): 157-167. [biogeography, conservation, floristics].
310. Hu, C., Liu, X., Li, X. & Zhao, Y. 2014. Evaluation of growth and biochemical indicators of *Salvinia natans* exposed to zinc oxide nanoparticles and zinc accumulation in plants. Environmental Science and Pollution Research International 21(1): 732-739.
311. Hu, J., Shi, X., Mao, X., Li, H., Chen, J. & Shi, J. 2014. Ecdysteroids from the ethanol extract of *Diplopterygium rufopilosum*. Phytochemistry Letters 8: 73-76.
312. Hu, N., Ding, D., Li, G., Zheng, J., Li, L., Zhao, W. & Wang, Y. 2014. Vegetation composition and Ra-226 uptake by native plant species at a uranium mill tailings impoundment in South China. Journal of Environmental Radioactivity 129: 100-106. [*Dryopteris scottii, Pteridium aquilinum*, *Pteris multifida*].
313. Hu, S. & Taylor, D. W. 2014. Floristics and paleoecology of an early Cretaceous flora from Jordan. Bulletin of the Peabody Museum of Natural History 55(2): 153-170. [fossils].

314. Huang, B. 2014. Other designs for wetland restoration project. In: An, S. & Wang, L. (eds.). Wetland Restoration: Shanghai Dalian Lake Project. Springer-Verlag: Berlin, pp. 83-108. [land management, *Salvinia natans*].
315. Huang, J., Chen, Z., Li, J. & Shang, H. 2014. Genetic diversity of *Huperzia serrata* (Huperziaceae) in Wuling mountains area detected by AFLP. Acta Botanica Boreali Occidentalia Sinica 34(1): 83-92. [medicinal plants, population genetics; Chinese].
316. Huang, K., Zheng, Z., Liao, W., Cao, L., Zheng, Y., Zhang, H., Zhu, G., Zhang, Z. & Cheddadi, R. 2014. Reconstructing late Holocene vegetation and fire histories in monsoonal region of southeastern China. Palaeogeography Palaeoclimatology Palaeoecology 393: 102-110. [*Dicranopteris*, fossils, Holocene].
317. Huang, Q., Li, W., Fan, R. & Chang, Y. 2014. New MADS-box gene in fern: cloning and expression analysis of DfMADS1 from *Dryopteris fragrans*. PLoS One 9(1): e86349. [MADS-box gene].
318. Huang, X. T., Qian, Z. M., He, X., Gong, Q., Wu, K. C., Jiang, L. R., Lu, L. N., Lu, L. N., Zhang, H. Y., Yung, W. H. & Ke, Y. 2014. Reducing iron in the brain: a novel pharmacologic mechanism of huperzine A in the treatment of Alzheimer's disease. Neurobiology of Aging 35(5): 1045-1054. [*Huperzia serrata*, medicinal plants].
319. Huang, Y., Kang, R., Ma, X., Qi, Y., Mulder, J. & Duan, L. 2014. Effects of calcite and magnesite application to a declining Masson pine forest on strongly acidified soil in Southwestern China. Science of the Total Environment 481: 469-478. [*Dicranopteris pedata*, *Dryopteris fuscipes*, fertilization, habitat, *Woodwardia japonica*].
320. Huebers, M., Bomfleur, B., Krings, M., Pott, C. & Kerp, H. 2014. A reappraisal of Mississippian (Tournaisian and Visean) adpression floras from central and northwestern Europe. Zitteliana Reihe A 54: 39-52. [fossils].
321. Hughes, G., Cohan, A., White, M. & Brown, E. 2014. Subalpine vegetation change 14 years after feral animal removal on windward East Maui, Hawai'i. Pacific Science 68(1): 19-31. [goats, land management, Maui, pigs, restoration].
322. Huhta, A. P. & Rautio, P. 2014. Flood meadows in Finland - their development during the past century. Nordic Journal of Botany 32(6): 858-870. [*Equisetum fluviatile*].
323. Hunyadi, A., Martins, A., Danko, B., Chang, F. R. & Wu, Y. C. 2014. Protoflavones: a class of unusual flavonoids as promising novel anticancer agents. Phytochemistry Reviews 13: 69-77. [*Cyclosorus*, *Equisetum*, *Macrothelypteris*, medicinal plants, *Pseudophegopteris*].
324. Husby, C. E., Delatorre-Herrera, J., Oberbauer, S. F., Grau, A. & Novara, L. 2014. Stomatal conductance patterns of *Equisetum giganteum* stems in response to environmental factors in South America. Botany 92(10): 701-712. [Argentina].
325. Hussain, M. M., Ahmad, B., Rashid, E., Hashim, S., Marwat, K. B. & Jan, A. 2014. *In vitro* antibacterial activity of methanol and water extracts of *Adiantum capillus-veneris* and *Tagetes patula* against multidrug resistant bacterial strains. Pakistan Journal of Botany 46(1): 363-368. [medicinal plants].
326. Hussner, A. 2014. Long-term macrophyte mapping documents a continuously shift from native to non-native aquatic plant dominance in the thermally abnormal River Erft (North Rhine-Westphalia, Germany). Limnologica 48: 39-45. [*Azolla filiculoides*, invasive species].
327. Hutchinson, J. T. & Langeland, K. A. 2014. Tolerance of *Lygodium microphyllum* and *L. japonicum* spores and gametophytes to freezing temperature. Invasive Plant Science and Management 7(2): 328-335. [frost tolerance].
328. Iglay, R. B., Leopold, B. D. & Miller, D. A. 2014. Vegetation responses to fire and herbicide in intensively managed, mid-rotation pine. Forest Ecology and Management 328: 69-78.
329. Iliadou, E., Panitsa, M., Raus, T. & Dimopoulos, P. 2014. Flora and factors affecting species diversity in protected "Natura 2000" sites of the Ionian area: the Echinades islet group (Greece). Willdenowia 44(1): 121-136. [island biogeography].

330. Ingham, C. S. 2014. Himalaya blackberry (*Rubus armeniacus*) response to goat browsing and mowing. Invasive Plant Science and Management 7(3): 532-539. [*Blechnum spicant*, invasive species, land management, Oregon, *Polystichum munitum*, *Pteridium aquilinum*].
331. Isaka, Y. & Sato, T. 2014. Molecular phylogenetic and divergence time estimation analyses of the sawfly subfamily Selandriinae (Hymenoptera: Tenthredinidae). Entomological Science 17(4): 435-439. [coevolution, plant-insect interactions].
332. Ishaq, M. S., Hussain, M. M., Afridi, M. S., Ali, G., Khattak, M., Ahmad, S. & Shakirullah, S. 2014. *In vitro* phytochemical, antibacterial, and antifungal activities of leaf, stem, and root extracts of *Adiantum capillus-veneris*. Scientific World Journal : 269793. [medicinal plants].
333. Ivanova, A. A., Kopylova-Guskova, E. O., Shipunov, A. B. & Volkova, P. A. 2014. Post-fire succession in the northern pine forest in Russia: a case study. Wulfenia 21: 119-128. [*Equisetum silvaticum*].
334. Ivanova, E. A., Anishchenko, O. V., Glushchenko, L. A., Gaevsky, N. A. & Kolmakov, V. I. 2014. Contribution of different groups of autotrophs to the primary production of the mountain Lake Oiskoe. Contemporary Problems of Ecology 7(4): 397-409. [*Equisetum fluviatile*, Russia].
335. Jackson, C. M. 2014. Bracken and the glassmaker's art. Fern Gazette 19: 281-294. [ash, glass manufacture, *Pteridium aquilinum*].
336. Jadulco, R. C., Koch, M., Kakule, T. B., Schmidt, E. W., Orendt, A., He, H., Janso, J. E., Janso, J. E., Larson, E. C., Pond, C., Matainaho, T. K. & Barrows, L. R. 2014. Isolation of pyrrolocins A-C: cis- and trans-decalin tetramic acid antibiotics from an endophytic fungal-derived pathway. Journal of Natural Products 77(11): 2537-2544.
337. Jamrichova, E., Hajkova, P., Horsak, M., Rybnickova, E., Lacina, A. & Hajek, M. 2014. Landscape history, calcareous fen development and historical events in the Slovak Eastern Carpathians. Vegetation History and Archaeobotany 23(5): 497-513. [palynology].
338. Janiak, A., Galej, K., Parusel, J. B. & Szarejko, I. 2014. A study of the genetic variation of the aquatic fern *Marsilea quadrifolia* L. preserved in botanical collections in Poland and originated from natural populations in Europe. Flora 209(11): 655-665. [France, Germany, Poland, population genetics, Slovakia].
339. Janko, K. 2014. Let us not be unfair to asexuals: their ephemerality may be explained by neutral models without invoking any evolutionary constraints of asexuality. Evolution 68(2): 569-576. [*Astrolepis*, polyploidy, reproductive biology].
340. Jassey, V. E. J., Lamentowicz, L., Robroek, B. J. M., Gazbka, M., Rusinska, A. & Lamentowicz, M. 2014. Plant functional diversity drives niche-size-structure of dominant microbial consumers along a poor to extremely rich fen gradient. Journal of Ecology 102(5): 1150-1162. [Poland, *Thelypteris palustris*].
341. Jeong, E. K., Oh, C., Kim, K., Paik, I. S., Philippe, M., Kim, H. J. & Lim, J. D. 2014. Co-occurrence of *Xenoxylon meisteri* Palib. et Jarm. and fossil tree ferns within the lower Cretaceous Nakdong formation at Mt. Geummubong, Korea and its palaeoclimatic implications. Cretaceous Research 50: 120-125.
342. Jeong, K. Y., Choi, J. Y. & Jeong, K. S. 2014. Influence of aquatic macrophytes on the interactions among aquatic organisms in shallow wetlands (Upo Wetland, South Korea). Journal of Ecology and Environment 37(42095): 185-194. [*Salvinia natans*].
343. Jeong, S., Moon, H. S. & Nam, K. 2014. Enhanced uptake and translocation of arsenic in Cretan brake fern (*Pteris cretica* L.) through siderophorearsenic complex formation with an aid of rhizospheric bacterial activity. Journal of Hazardous Materials 280: 536-543.
344. Ji, Y., Qin, Z., Wang, Q. & Dai, X. 2014. Development of gametophytes of *Tectaria decurrens* and *Tectaria fauriei*. Acta Botanica Boreali Occidentalia Sinica 34(4): 689-694. [Chinese].
345. Jia, R. D., Guo, C. C., Xu, G. X., Shan, H. Y. & Kong, H. Z. 2014. Evolution of the cyclin gene family in plants. Journal of Systematics and Evolution 52(5): 651-659. [*Selaginella moellendorffii*].

346. Jiang, F. S., Huang, Y. H., Wang, M. K., Lin, J. S., Zhao, G. & Ge, H. L. 2014. Effects of rainfall intensity and slope gradient on steep colluvial deposit erosion in southeast China. Soil Science Society of America Journal 78(5): 1741-1752. [*Dicranopteris dichotoma*, slope].
347. Jiang, M., Shen, M. X., Shen, X. P. & Dai, Q. G. 2014. Effect of long-term fertilization pattern on weed community diversity in rice field. Chinese Journal of Ecology 33(7): 1748-1756. [*Ceratopteris thalictroides*; Chinese].
348. Jiang, S. Z., Lei, T., Wei, K. & Yang, Y. R. 2014. Collective total synthesis of tetracyclic diquinane *Lycopodium* alkaloids (+)-paniculatine, (-)-magellanine, (+)-magellaninone and analogues thereof. Organic Letters 16(21): 5612-5615.
349. Jiang, W. W., Liu, F., Gao, X., He, J., Cheng, X., Peng, L. Y., Wu, X. D. & Zhao, Q. S. 2014. Huperserines A-E, *Lycopodium* alkaloids from *Huperzia serrata*. Fitoterapia 99: 72-77. [medicinal plants].
350. Jiao, Y. & Guo, H. 2014. Prehistory of the angiosperms: characterization of the ancient genomes. In: Paterson, A. H. (ed.). Genomes of herbaceous land plants. Academic Press: London, pp. 223-245. [chromosomes, genomes, RNA editing, *Selaginella moellendorffii*].
351. Jimenez Bautista, L., Damon, A., Ochoa-Gaona, S. & Clark Tapia, R. 2014. Impact of silvicultural methods on vascular epiphytes (ferns, bromeliads and orchids) in a temperate forest in Oaxaca, Mexico. Forest Ecology and Management 329: 10-20. [conservation, land management].
352. Jivad, N. & Rabiei, Z. 2014. A review study on medicinal plants used in the treatment of learning and memory impairments. Asian Pacific Journal of Tropical Biomedicine 4(10): 780-789. [*Huperzia serrata*, medicinal plants].
353. Johnson, T. & Siegel, D. 2014. Complanadine A, a selective agonist for the Mas-related G protein-coupled receptor X2. Bioorganic & Medicinal Chemistry Letters 24(15): 3512-3515. [alkaloids, antihyperalgesics, *Lycopodium complanatum*].
354. Jones, M. M., Cicuzza, D., van Straaten, O., Veldkamp, E. & Kessler, M. 2014. Determinants of fern and angiosperm herb community structure in lower montane rainforest in Indonesia. Journal of Vegetation Science 25(5): 1216-1224. [microhabitat, Sulawesi].
355. Joyce, B. L., Eda, S., Dunlap, J. & Stewart, C. N., Jr. 2014. Morphology and ploidy level determination of *Pteris vittata* callus during induction and regeneration. BMC Biotechnology 14: 96. [tissue culture].
356. Jud, N. A. 2014. Morphotype catalog of a zone I (Aptian-Earliest Albian) flora from Fairlington, Virginia, USA. Bulletin of the Peabody Museum of Natural History 55(2): 135-152. [*Acrostichum*, Cretaceous, fossils].
357. Jumadi, O., Hiola, S. F., Hala, Y., Norton, J. & Inubushi, K. 2014. Influence of *Azolla* (*Azolla microphylla* Kaulf.) compost on biogenic gas production, inorganic nitrogen and growth of upland Kangkong (*Ipomoea aquatica* Forsk.) in a silt loam soil. Soil Science and Plant Nutrition 60(5): 722-730. [fertilizer].
358. Jung, J. E., Pandit, S. & Jeon, J. G. 2014. Identification of linoleic acid, a main component of the n-hexane fraction from *Dryopteris crassirhizoma*, as an anti-*Streptococcus mutans* biofilm agent. Biofouling 30(7): 789-798. [antibiotics].
359. Jung, J., Ryu, Y., Won, H. & Choi, H. K. 2014. Morphological and molecular characterization of a new record of *Isoetes coromandelina* subsp. *coromandelina* from Cambodia. Plant Systematics and Evolution 300(1): 43-50.
360. Jung, J., Singh, S. K., Pande, H. C., Srivastava, G. K. & Choi, H. K. 2014. Genetic diversity and population structure of Indian *Isoetes dixitei* Shende based on amplified fragment length polymorphisms and intron sequences of LEAFY. Aquatic Botany 113: 1-7. [endemism, population genetics].
361. Kalluri, J., Cosey, W., Gonzalez, R., Hartman, P., Loni, A., Canham, L. T. & Coffer, J. L. 2014. Sustainable routes to porous silicon manufacture for drug delivery. 247th National Spring Meeting of the American-Chemical-Society (ACS), Dallas, TX, p. 657.

362. Kang, S. N., Lee, J. S., Park, J. H., Cho, J. H., Park, J. H., Cho, K. K., Lee, O. H. & Kim, I. S. 2014. *In vitro* anti-osteoporosis properties of diverse Korean *Drynariae rhizoma* phenolic extracts. Nutrients 6(4): 1737-1751. [antioxidants, medicinal plants, pharmacognosy].
363. Kanther, R. P. & Gena, D. 2014. Ethno-medico-botanical studies on some pteridophytes of Rajasthan. Indian Fern Journal 31(1-2): 46-52. [medicinal plants].
364. Kao, T. T., Chiou, W. L., Hsu, S. Y., Chen, C. M., Chao, Y. S. & Huang, Y. M. 2014. Hybrid origin of *Nephrolepis* X *hippocrepicis* Miyam. (Nephrolepidaceae). International Journal of Plant Reproductive Biology 6(1): 1-14.
365. Karger, D. N., Weigelt, P., Amoroso, V. B., Darnaedi, D., Hidayat, A., Kreft, H. & Kessler, M. 2014. Island biogeography from regional to local scales: evidence for a spatially scaled echo pattern of fern diversity in the Southeast Asian archipelago. Journal of Biogeography 41(2): 250-260. [Indonesia, Philippines].
366. Kaur, P., Kaur, V., Kumar, M. & Kaur, S. 2014. Suppression of SOS response in E-coli PQ37, antioxidant potential and antiproliferative action of methanolic extract of *Pteris vittata* L. on human MCF-7 breast cancer cells. Food and Chemical Toxicology 74: 326-333. [India, medicinal plants].
367. Kawai, Y., Ono, E. & Mizutani, M. 2014. Expansion of specialized metabolism-related superfamily genes via whole genome duplications during angiosperm evolution. Plant Biotechnology 31(5): 579-584. [evolution, genetics, *Selaginella moellendorffii*].
368. Keeley, J. E. 2014. Aquatic CAM photosynthesis: a brief history of its discovery. Aquatic Botany 118: 38-44. [Andes, aquatic plants, *Isoetes*, Peru].
369. Kelly, R., Leach, K., Cameron, A., Maggs, C. A. & Reid, N. 2014. Combining global climate and regional landscape models to improve prediction of invasion risk. Diversity and Distributions 20(8): 884-894. [aquatic plants, *Azolla filiculoides*, invasive species, Ireland, niche modelling, *Salvinia molesta*].
370. Kelly, R., Lundy, M. G., Mineur, F., Harrod, C., Maggs, C. A., Humphries, N. E., Sims, D. W. & Reid, N. 2014. Historical data reveal power-law dispersal patterns of invasive aquatic species. Ecography 37(6): 581-590. [*Azolla filiculoides*, biogeography].
371. Kenrick, P. & Strullu-Derrien, C. 2014. The origin and early evolution of roots. Plant Physiology 166(2): 570-580. [fossils, lycophytes].
372. Kessler, M., Guedel, R., Salazar, L., Homeier, J. & Kluge, J. 2014. Impact of mycorrhization on the abundance, growth and leaf nutrient status of ferns along a tropical elevational gradient. Oecologia 175(3): 887-900. [Andes, Ecuador].
373. Kessler, M., Salazar, L., Homeier, J. & Kluge, J. 2014. Species richness-productivity relationships of tropical terrestrial ferns at regional and local scales. Journal of Ecology 102(6): 1623-1633. [Ecuador, environmental gradients].
374. Khan, A., Islam, M. H., Islam, M. E., Al-Bari, M. A. A., Parvin, M. S., Abu Sayeed, M., Islam, M. N. & Haque, M. E. 2014. Pesticidal and pest repellency activities of rhizomes of *Drynaria quercifolia* (J. Smith) against *Tribolium castaneum* (Herbst). Biological Research 47: 51.
375. Kholia, B. S. & Fraser-Jenkins, C.R. 2014. Rediscovery of *Ophioglossum pendulum* L. from eastern Himalaya, with a note on historical background and new distribution record to Sikkim. Indian Journal of Forestry 37(3): 347-354.
376. Kholia, B. S. 2014. *Cheilanthes tibetica* Fraser-Jenk. & Wangdi, a new fern to India. Indian Journal of Forestry 37: 179-182.
377. Kholia, B. S. 2014. Ferns and fern-allies of Sikkim Himalaya –a pictorial handbook, Part-II. Department of Forests, Environment, Wildlife management, Government of Sikkim and Botanical Survey of India Gangtok. pp. i-ix, 1-291.
378. Kholia, B. S. 2014. Traditional uses of pteridophytes in Sikkim Himalaya. In: Kumar, S. (ed.) Ethanobotanical Studies in India. Deep Publications: New Delhi, pp. 291-302.
379. Kholia, B. S., Das, P. & Pradhan, S. 2014. On the occurrence of *Athyrium nakanoi* Makino (Woodsiaceae) in Sikkim Himalaya. Indian Journal of Forestry 37: 81-86.

380. Khullar, S. P. & Verma, S. 2014. Some additions to the pteridophyte flora of Himachal Pradesh (W. Himalaya). Indian Fern Journal 31(1-2): 102-111. [*Cryptogramma stelleri, Leptochilus ellipticus, Microlepia setosa, Oleandra wallichii, Tomophyllum donianum, Vittaria linearifolia*].
381. Kim, D. G., Kang, F. J., Baek, M. J., Lee, C. Y., Kim, J. G. & Bae, Y. J. 2014. Analyses of benthic macroinvertebrate colonization during the early successional phases of created wetlands in temperate Asia. Fundamental and Applied Limnology 184(1): 35-49. [habitat, Korea, *Marsilea quadrifolia*].
382. Kim, H. R., Shin, J. H., Jeong, H. M. & You, Y. H. 2014. Effects of environmental factors on the growth response of above- and below-ground parts of *Mankyua chejuense*, endangered endemic plant to Jeju province, in Korea. Journal of Ecology and Environment 37(42095): 61-67. [ecological niche, microhabitat].
383. Kim, H. T. & Kim, K. J. 2014. Chloroplast genome differences between Asian and American *Equisetum arvense* (Equisetaceae) and the origin of the hypervariable trny-trne intergenic spacer. PLoS One 9(8): e103898.
384. Kim, H. T., Chung, M. G. & Kim, K. J. 2014. Chloroplast genome evolution in early diverged leptosporangiate ferns. Molecules and Cells 37(5): 372-382. [*Diplopterygium glaucum, Lygodium japonicum, Osmunda cinnamomea*].
385. Kiontke, S., Gnau, P., Haselsberger, R., Batschauer, A. & Essen, L. O. 2014. Structural and evolutionary aspects of antenna chromophore usage by class II photolyases. Journal of Biological Chemistry 289(28): 19659-19669. [biochemistry, phytolyase].
386. Kirschner, R. & Liu, L. C. 2014. Mycosphaerellaceous fungi and new species of *Venustosynnema* and *Zasmidium* on ferns and fern allies in Taiwan. Phytotaxa 176: 309-323. [*Dicranopteris linearis, Pseudocercospora, Selaginella moellendorffii*].
387. Knoke, T., Bendix, J., Pohle, P., Hamer, U., Hildebrandt, P., Roos, K., Gerique, A., Gerique, A., Breuer, L., Tischer, A., Silva, B., Calvas, B., Aguirre, N., Castro, L. M., Windhorst, D., Weber, M., Stimm, B., Guenter, S., Palomeque, X., Mora, J., Monsandl, R. & Beck, E. 2014. Afforestation or intense pasturing improve the ecological and economic value of abandoned tropical farmlands. Nature Communications 5: 5612. [Andes, Ecuador, *Pteridium*].
388. Knox, E. B. 2014. The dynamic history of plastid genomes in the Campanulaceae sensu lato is unique among angiosperms. Proceedings of the National Academy of Sciences of the United States of America 111(30): 11097-11102. [endosymbiotic transformation, genetics].
389. Koeniger, M. 2014. Chloroplast movement in higher plants, ferns and bryophytes: a comparative point of view. In: Hanson, D. T., & Rice, S. K. (eds.). Photosynthesis in bryophytes and early land plants. Springer-Verlag: Dordrecht, Netherlands, pp. 131-150. [*Adiantum capillus-veneris*].
390. Komatsu, A., Terai, M., Ishizaki, K., Suetsugu, N., Tsuboi, H., Nishihama, R., Yamato, K. T., Wada, M. & Kohchi, T. 2014. Phototropin encoded by a single-copy gene mediates chloroplast photorelocation movements in the liverwort *Marchantia polymorpha*. Plant Physiology 166(1): 411. [*Adiantum capillus-veneris*].
391. Kong, S. G. & Wada, M. 2014. Recent advances in understanding the molecular mechanism of chloroplast photorelocation movement. Biochimica et Biophysica Acta 1837: 522-530. [*Adiantum capillus-veneris*].
392. Korall, P. & Pryer, K. M. 2014. Global biogeography of scaly tree ferns (Cyatheaceae): evidence for Gondwanan vicariance and limited transoceanic dispersal. Journal of Biogeography 41(2): 402-413.
393. Kosaka, N., Kawahara, T. & Takahashi, H. 2014. Vegetation factors influencing the establishment and growth of the endangered Japanese orchid, *Cypripedium macranthos* var. *rebunense*. Ecological Research 29(5): 1003-1023. [*Equisetum arvense, Equisetum hyemale*].
394. Kosesakal, T. 2014. Effects of seasonal changes on pigment composition of *Azolla filiculoides* Lam. American Fern Journal 104(2): 58-66. [phenology, Turkey].

395. Koyanagi, T. F., Yamada, S., Yonezawa, K. I., Kitagawa, Y. & Ichikawa, K. 2014. Plant species richness and composition under different disturbance regimes in marginal grasslands of a Japanese terraced paddy field landscape. Applied Vegetation Science 17(4): 636-644. [indicator species, plant communities].

396. Kraft, C. E., Gordon, E. R. L. & Angert, E. R. 2014. A rapid method for assaying Thiaminase I activity in diverse biological samples. PLoS One 9(3): e92688. [new methods, toxic plants].

397. Krauczuk, E. R. & Keller, H. A. 2014. On the presence and conservation status of *Cyathea delgadii* (Cyatheaceae) in Argentina. Lilloa 51(2): 242-245.

398. Krauspenhar, P. M., Carvalho, M. A., Fauth, G. & Lana, C. C. 2014. Albian palynostratigraphy of ODP Leg 207 (Holes 1257A, 1258C and 1260B), Demerara Rise, Equatorial Atlantic. Revue de Micropaleontologie 57(1): 1-13. [Cretaceous, *Crybelosporites*, *Elaterosporites*, fossils, *Inaperturopollenites*, Suriname].

399. Kredics, L., Hatvani, L., Naeimi, S., Koermoeczi, P., Manczinger, L., Vagvoelgyi, C. & Druzhinina, I. 2014. Biodiversity of the genus *Hypocrea*/*Trichoderma* in different habitats. In: Gupta, V. K., Schmoll, M., Herrera-Estrella, A., Upadhyay, R. S., Druzhinina, I. & Tuohy, M. G. (eds.). Biotechnology and biology of *Trichoderma*. Elsevier: Amsterdam, Netherlands, pp. 3-24. [ascomycetes, Deuteromycetes, *Huperzia serrata*].

400. Kreshchenok, I. A., Nesterova, S. V., Gureyeva, I. I. & Kuznetsov, A. A. 2014. Cryopreservation of chlorophyllous spores of East Asian ferns. Tomsk State University Journal of Biology 2(26): 42-52. [Russian, English summary].

401. Krieger, J. D. 2014. A protocol for the creation of useful geometric shape metrics illustrated with a newly derived geometric measure of leaf circularity. Applications in Plant Sciences 2: 1400009. [leaf geometry, morphometry].

402. Krippel, Y. & Colling, G. 2014. Notes floristiques. Observations faites au Luxembourg (2012-2013). Bulletin de la Societe des Naturalistes Luxembourgeois 115: 109-124. [*Ceterach officinarum*, *Lycopodium clavatum*].

403. Krishna, K. 2014. Wet land rice agroecosystem. In: Krishna, K. R. (ed.). Agroecosystems: soils, climate, crops, nutrient dynamics, and productivity. Apple Academic Press: Oakville, ON, Canada, pp. 53-64. [*Azolla*, fertilizer].

404. Kuklova, M., Kukla, J. & Simkova, I. 2014. The changes of energy and carbon in top soil and aboveground part of *Dryopteris filix-mas* species along the succession of beech forest. Polish Journal of Ecology 62(3): 467-478. [Slovakia].

405. Kulus, D. & Zalewska, M. 2014. Cryopreservation as a tool used in long-term storage of ornamental species - A review. Scientia Horticulturae 168: 88-107. [*Asplenium cuneifolium*, conservation, cryopreservation, *Cyathea australis*, spore bank].

406. Kumari, A., Pakade, Y. B., Chand, P., Prasad, M. N. V. & Lal, B. 2014. Comparative accounts of chromium accumulation in three ferns under hydroponic system. Indian Journal of Scientific & Industrial Research 73: 553-558. [*Diplazium esculentum, Polystichum squarrosum, Pteris cretica*].

407. Kumari, M. & Tripathi, B. D. 2014. Effect of aeration and mixed culture of *Eichhornia crassipes* and *Salvinia natans* on removal of wastewater pollutants. Ecological Engineering 62: 48-53. [biosorption, phytoremediation].

408. Kuschel, G. 2014. The blind weevils of *Myrtonymina* in New Caledonia and Australia (Curculionidae: Curculioninae: Erirhinini: *Myrtonymina*). In: Guilbert, E., Robillard, T., Jourdan, H. & Grandcolas, P. (eds.). Zoologia Neocaledonica 8: Biodiversity Studies in New Caledonia. Muséum national d'Histoire naturelle, Paris, pp. 165-180. [herbivory, host plants].

409. Kustatscher, E., Bauer, K., Butzmann, R., Fischer, T. C., Meller, B., van Konijnenburg-van Cittert, J. H. A. & Kerp, H. 2014. Sphenophytes, pteridosperms and possible cycads from the Wuchiapingian (Lopingian, Permian) of Bletterbach (Dolomites, Northern Italy). Review of Palaeobotany & Palynology 208: 65-82. [fossils].

410. Kustatscher, E., Dellantonio, E. & Van Konijnenburg-Van Cittert, J. H. A. 2014. The ferns of the late Ladinian, middle Triassic flora from Monte Agnello, Dolomites, Italy. Acta Palaeontologica Polonica 59(3): 741-755. [*Dipteridaceae*, fossils, Matoniaceae].
411. Kuz'mina, V. V. 2014. Effect of macrophytes on the activity of digestive enzymes in fish intestinal mucosa. Inland Water Biology 7(1): 82-87. [*Ceratopteris pteridoides*, herbivory].
412. Labiak, P. H., Sundue, M., Rouhan, G., Hanks, J. G., Mickel, J. T. & Moran, R. C. 2014. Phylogeny and historical biogeography of the lastreopsid ferns (Dryopteridaceae). American Journal of Botany 101(7): 1207-1228. [*Coveniella*, *Lastreopsis*, *Megalastrum*, *Oenotrichia*, *Rumohra*].
413. Laenen, B., Shaw, B., Schneider, H., Goffinet, B., Paradis, E., Desamore, A., Heinrichs, J., Villarreal, J. C., Gradstein, S. R., McDaniel, S. F., Long, D. G., Forrest, L. L., Hollingsworth, M. L., Crandall-Stotler, B., Davis, E. C., Engel, J., Von Konrat, M., Cooper, E. D., Patino, J., Cox, C. J., Vanderpoorten, A. & Shaw, A. J. 2014. Extant diversity of bryophytes emerged from successive post-Mesozoic diversification bursts. Nature Communications 5: 6134.
414. Lake, E. C., Smith, M. C., Pratt, P. D., Boughton, A. J. & Pemberton, R. W. 2014. Dispersal and establishment of new populations of the biological control agent *Floracarus perrepae* (Acariformes: Eriophyidae) on Old World climbing fern, *Lygodium microphyllum* (Polypodiales: Lygodiaceae). Florida Entomologist 97(2): 827-829. [invasive species].
415. Landi, M., Zoccola, A., Bacaro, G. & Angiolini, C. 2014. Phenology of *Dryopteris affinis* ssp. *affinis* and *Polystichum aculeatum*: modeling relationships to the climatic variables in a Mediterranean area. Plant Species Biology 29(2): 129-137. [Italy, modelling].
416. Lang, S. I., Aerts, R., van Logtestijn, R. S. P., Schweikert, W., Klahn, T., Quested, H. M., van Hal, J. R. & Cornelissen, J. H. C. 2014. Mapping nutrient resorption efficiencies of subarctic cryptogams and seed plants onto the tree of life. Ecology and Evolution 4(11): 2217-2227. [nitrogen, phosphorus].
417. Langhammer, A. J. & Nilsen, O. G. 2014. *In vitro* inhibition of human CYP1A2, CYP2D6, and CYP3A4 by six herbs commonly used in pregnancy. Phytotherapy Research 28(4): 603-610. [*Equisetum arvense*, medicinal plants].
418. Lanyon, F. 2014. Raising ferns from spores using plastic milk bottles. Pteridologist 6(1): 10-13. [horticulture, propagation, spore germination].
419. Lara-Perez, L. A., Noa-Carrazana, J. C., Hernandez-Gonzalez, S., Alarcon-Gutierrez, E., Sanchez-Velasquez, L. R., Zulueta-Rodriguez, R., Lara-Capistran, L. & Andrade-Torres, A. 2014. Diversity and colonization of arbuscular mycorrhizal fungi in the tree fern *Alsophila firma* in rainy and dry season. Symbiosis 62(3): 143-150. [Mexico, Veracruz].
420. Lara-Perez, L. A., Noa-Carrazana, J. C., Landa Lopez, A. J., Hernandez-Gonzalez, S., Oros-Ortega, I. & Andrade Torres, A. 2014. Colonization and structure of arbuscular mycorrhizal fungi community in *Alsophila firma* (Cyatheales: Cyatheaceae) from a tropical montane cloud forest in Veracruz, Mexico. Revista de Biologia Tropical 62(4): 1609-1623. [Spanish].
421. Lastrucci, L., Foggi, B., Ferretti, G., Guidi, T., Geri, F. & Viciani, D. 2014. The influence of taxonomic revisions on species distribution assessment: the case of three *Asplenium* species on Tuscan ultramafic soils. Webbia 69(2): 295-300. [herbaria, Italy, rarefaction].
422. Lautenschlager, A. D., Matthews, T. G. & Quinn, G. P. 2014. Utilization of organic matter by invertebrates along an estuarine gradient in an intermittently open estuary. Estuarine Coastal and Shelf Science 149: 232-243. [Australia, *Azolla filiculoides*].
423. Leao, G. A., Oliveira, J. A., Farnese, F. S., Gusman, G. S. & Felipe, R. T. A. 2014. Sulfur metabolism: Different tolerances of two aquatic macrophytes exposed to arsenic. Ecotoxicology and Environmental Safety 105: 36-42. [*Salvinia minima*].
424. Lebrao, C., Coelho, C. B. & Esteves, L. M. 2014. Morphology of spores of pteridophyte from the Parque Estadual das Fontes do Ipiranga (Sao Paulo, Brazil) Family: 21-Tectariaceae. Hoehnea 41(1): 103-108. [Portuguese].

425. Lee, A. S., Liau, B. B. & Shair, M. D. 2014. A unified strategy for the synthesis of 7-membered-ring-containing *Lycopodium* alkaloids. Journal of the American Chemical Society 136(38): 13442-13452.
426. Lee, C. W., Seo, J. I., Youn, H. J. & Kim, K. 2014. Effectiveness of rehabilitation treatments on a slowly revegetating hillslope in a recently burned coastal forest, Republic of Korea. Landscape and Ecological Engineering 10(1): 249-260. [fire ecology, *Pteridium aquilinum*].
427. Lee, S. H., Ji, W., Lee, W. S., Koo, N., Koh, I. H., Kim, M. S. & Park, J. S. 2014. Influence of amendments and aided phytostabilization on metal availability and mobility in Pb/Zn mine tailings. Journal of Environmental Management 139: 15-21. [heavy metals, *Pteridium aquilinum*, restoration].
428. Lee, S. J. & Park, C. W. 2014. Spore morphology of the genus *Dryopteris* Adans. (Dryopteridaceae) in Korea. Journal of Plant Biology 57(5): 302-311.
429. Lee, Y. E., Liu, H. C., Lin, Y. L., Liu, S. H., Yang, R. S. & Chen, R. M. 2014. *Drynaria fortunei* J. Sm. improves the bone mass of ovariectomized rats through osteocalcin-involved endochondral ossification. Journal of Ethnopharmacology 158: 94-101.
430. Legrand, J., Yamada, T. & Nishida, H. 2014. Palynofloras from the upper Barremian-Aptian Nishihiro Formation (Outer Zone of southwest Japan) and the appearance of angiosperms in Japan. Journal of Plant Research 127(2): 221-232. [Cretaceous, fossils].
431. Lehnert, M. 2014. Do you know *Cyathea divergens* (Cyatheaceae-Polypodiopsida)? Phytotaxa 161(1): 1-42. [hybrids, tree ferns].
432. Leitao, F., Leitao, S. G., da Fonseca-Kruel, V. S., Silva, I. M. & Martins, K. 2014. Medicinal plants traded in the open-air markets in the State of Rio de Janeiro, Brazil: an overview on their botanical diversity and toxicological potential. Revista Brasileira de Farmacognosia-Brazilian Journal of Pharmacognosy 24(2): 225-247. [ethnobotany, *Selaginella convoluta*].
433. Lessl, J. T., Luo, J. & Ma, L. Q. 2014. *Pteris vittata* continuously removed arsenic from non-labile fraction in three contaminated-soils during 3.5 years of phytoextraction. Journal of Hazardous Materials 279: 485-492. [phytoremediation].
434. Lestari, W. S., Adjie, B., Jaruwatanaphan, T., Watano, Y. & Pharmawati, M. 2014. Molecular phylogeny of maidenhair fern genus *Adiantum* (Pteridaceae) from Lesser Sunda Islands Indonesia based on rbcl and trnl-f. Reinwardtia 14(1): 143-156.
435. Letelier V., S., Baez R., P., Rebolledo U., A. & Fabres C, A. 2014. Native and exotic terrestrial molluscs of the Juan Fernandez archipelago (AJF) (Mollusca: Gastropoda). Museo Nacional de Historia Natural Boletin 63: 187-199. [*Blechnum*, Chile, herbivory; Spanish].
436. Lewis-Smith, R. I. 2014. A fern cultured from Antarctic glacier detritus. Antarctic Science 26(4): 341-344. [dispersal, *Elaphoglossum hybridum*, spore bank].
437. Lewis-Smith, R. I. 2014. A fern cultured from Antarctic glacier detritus. Pteridologist 6(1): 58-60. [dispersal, *Elaphoglossum hybridum*, spore bank].
438. Li, F. W., Villarreal, J. C., Kelly, S., Rothfels, C. J., Melkonian, M., Frangedakis, E., Ruhsam, M., Ruhsam, M., Der, J. P., Pittermann, J., Burge. D. O., Pokornyk, L., Larsson, A., Chen, T., Weststrand, S., Thomas, P., Carpenter, E., Zhang, Y., Tian, Z., Chen, L., Yan, Z., Zhu, Y., Sun, X., Wang, J., Stevenson, D. W., Crandall-Stotler, B. J., Shaw, A. J., Deyholos, M. K., Soltis, D. E., Graham, S. W., Windham, M. D., Langdale, J. A., Wong, G. K. S., Mathews, S. & Pryer, K. M. 2014. Horizontal transfer of an adaptive chimeric photoreceptor from bryophytes to ferns. Proceedings of the National Academy of Sciences of the United States of America 111(18): 6672-6677. [gene transfer, neochrome, phytochrome, *Pteridium aquilinum*].
439. Li, J. T., Li, S. P., Chen, Y. J., Jia, P., Hua, Z. S., Wang, S. L., Song, Y. S., Liao, B. & Shu, W. S. 2014. Phylogenetic structures of soil nematode communities along a successional gradient in an unreclaimed copper mine tailings site. Soil Biology & Biochemistry 77: 179-186. [*Hippochaete ramosissimum*].
440. Li, S., Liu, W. Y., Li, D. W., Li, Z. X., Song, L., Chen, K. & Fu, Y. 2014. Slower rates of litter decomposition of dominant epiphytes in the canopy than on the forest floor in a subtropical

montane forest, southwest China. Soil Biology & Biochemistry 70: 211-220. [*Phymatopteris connexa*].

441. Li, S., Zhao, M., Li, Y., Sui, Y., Yao, H., Huang, L. & Lin, X. 2014. Preparative isolation of six anti-tumour biflavonoids from *Selaginella doederleinii* hieron by high-speed counter-current chromatography. Phytochemical Analysis 25(2): 127-133. [cancer, medicinal plants].
442. Li, W. J. & Guan, K. Y. 2014. Valid publication of the name *Cyclogramma costularisora* (Thelypteridaceae), endemic to Yunnan, China. Annales Botanici Fennici 51(6): 407-408.
443. Li, X., Yin, X., Xi, H. C., Zhou, X. M. & Yang, Y. P. 2014. Investigation and analysis of impact from high frost on vascular plants in the Kunming Botanical Gardens. Plant Diversity and Resources 36(5): 639-652. [China, frost damage, frost tolerance; Chinese].
444. Li, Y. & Shi, L. 2014. Effect of desiccation level and storage temperature on green spore viability of *Osmunda japonica*. Cryobiology 68(3): 446-450. [conservation].
445. Liao, Z. & Wang, M. 2014. Study on the spore morphology of *Cystopteris* Bernh. In China. Acta Botanica Boreali Occidentalia Sinica 34(6): 1138-1142. [Chinese].
446. Libertin, M., Bek, J. & Drabkova, J. 2014. New sphenophyllaleans from the Pennsylvanian of the Czech Republic. Review of Palaeobotany & Palynology 200: 196-210. [*Bowmanites*, Carboniferous, fossils, new species, *Sphenophyllum*].
447. Lim, H. J., Kwon, J. & Jeon, H. 2014. *Pyrrosia lingua* reduces nociception in Mouse. Natural Product Sciences 20(4): 285-289. [medicinal plants].
448. Lin, C. H., Xu, H. L., Sun, W. L., Li, F. & Lin, G. Z. 2014. *Equisetum sylvaticum* base reduces atherosclerosis risk factors in rats fed a high-fat diet. Bangladesh Journal of Pharmacology 9(3): 257-261. [medicinal plants].
449. Lin, Y., Zhang, X. B., Yang, Z. R., Wu, T. T., Du, Q. & Song, L. 2014. Lectotypifications of ten names in ferns. Bulletin of Botanical Research 34(3): 292-294. [China].
450. Lindsay, K. C. 2014. The ferns of Antigua and Barbuda: a case of resurgence and resilience. Pteridologist 6(1): 14-18. [floristics].
451. Lindsay, S. & Chen, C. W. 2014. Three new combinations in *Haplopteris* (Pteridaceae subfam. Vittarioideae). Gardens' Bulletin (Singapore) 66(2): 169-171. [*Haplopteris alternans, Haplopteris dareicarpa, Haplopteris humblotii*].
452. Liu, B., Jin, H., Sun, Z., Miao, Y., Su, Z. & Zhang, C. 2014. Evidence of Holocene millennial-scale climatic change from Gonghe Basin peat deposit, northeastern Qinghai-Tibet Plateau. Journal of Arid Environments 106: 1-10. [*Lycopodium clavatum*].
453. Liu, D., Sun, W., Yuan, Y., Zhang, N., Hayward, A., Liu, Y. & Wang, Y. 2014. Phylogenetic analyses provide the first insights into the evolution of OVATE family proteins in land plants. Annals of Botany 113(7): 1219-1233. [*Selaginella moellendorffii*].
454. Liu, G., Cornwell, W. K., Pan, X., Cao, K., Ye, X., Huang, Z., Dong, M. & Cornelissen, J. H. C. 2014. Understanding the ecosystem implications of the angiosperm rise to dominance: leaf litter decomposability among magnoliids and other basal angiosperms. Journal of Ecology 102(2): 337-344. [nutrient absorption].
455. Liu, H. M., He, L. J. & Schneider, H. 2014. Towards the natural classification of tectarioid ferns: confirming the phylogenetic relationships of *Pleocnemia* and *Pteridrys* (eupolypods I). Journal of Systematics and Evolution 52(2): 161-174.
456. Liu, J., Zhang, X. H., Li, T. Y., Wu, Q. X. & Jin, Z. J. 2014. Soil characteristics and heavy metal accumulation by native plants in a Mn mining area of Guangxi, South China. Environmental Monitoring and Assessment 186(4): 2269-2279. [*Dicranopteris linearis, Pteris vittata*, restoration].
457. Liu, S., Ju, J. & Xia, G. 2014. Identification of the flavonoid 3 '-hydroxylase and flavonoid 3 ',5 '-hydroxylase genes from Antarctic moss and their regulation during abiotic stress. Gene 543(1): 145-152.
458. Liu, X., Chi, Z., Herzschuh, U., Wang, Y., Ni, J. & Xu, Q. 2014. A MIS 3 charcoal and pollen record and quantitative precipitation inferences from the Jingerwa section of the Nihewan

Basin, north-central China. Journal of Paleolimnology 51: 211-221. [climate change, fossils, Pleistocene, spores].

459. Liu, X., Luo, H. B., Huang, Y. Y., Bao, J. M., Tang, G. H., Chen, Y. Y., Wang, J. & Yin, S. 2014. Selaginpulvilins A-D, new phosphodiesterase-4 inhibitors with an unprecedented skeleton from *Selaginella pulvinata*. Organic Letters 16(1): 282-285.
460. Loetter, M. C., Mucina, L. & Witkowski, E. T. F. 2014. Classification of the indigenous forests of Mpumalanga Province, South Africa. South African Journal of Botany 90: 37-51.
461. Lomax, B. H., Hilton, J., Bateman, R. M., Upchurch, G. R., Leitch, I. J., Cromwell, A. & Knight, C. A. 2014. Reconstructing relative genome size of vascular plants through geological time. New Phytologist 201: 636-644. [evolution].
462. Longley, M. 2014. A trip to the Blue Mountains near Sydney, NSW, Australia. Pteridologist 6(1): 55-57.
463. Looy, C. V. & Hotton, C. L. 2014. Spatiotemporal relationships among late Pennsylvanian plant assemblages: palynological evidence from the Markley Formation, West Texas, USA. Review of Palaeobotany & Palynology 211: 10-27. [fossils].
464. Looy, C. V., Stevenson, R. A., Van Hoof, T. B. & Mander, L. 2014. Evidence for coal forest refugia in the seasonally dry Pennsylvanian tropical lowlands of the Illinois Basin, USA. PeerJ 2: e630. [fossils, spores].
465. Lopez Cabrera, M. I. & Olivero, E. B. 2014. *Ophiomorpha irregulaire* and associated trace fossils from the upper Cretaceous of Patagonia, Argentina: palaeogeographical and ethological significance. Spanish Journal of Palaeontology 29(1): 33-43. [fossils, Patagonia].
466. Lopez, R. A. & Renzaglia, K. S. 2014. Multiflagellated sperm cells of *Ceratopteris richardii* are bathed in arabinogalactan proteins throughout development. American Journal of Botany 101(12): 2052-2061.
467. Lopez-Gutierrez, B. N., Perez-Escandon, B. E. & Villavicencio Nieto, M. A. 2014. Sustainable use and conservation of medicinal plants in Cantarranas, Huehetla, Hidalgo, Mexico, as a way for improving the quality of live in the community. Botanical Sciences 92(3): 389-404. [Spanish].
468. Loriga, J., Schmidt, A. R., Moran, R. C., Feldberg, K., Schneider, H. & Heinrichs, J. 2014. The first fossil of a bolbitidoid fern belongs to the early-divergent lineages of *Elaphoglossum* (Dryopteridaceae). American Journal of Botany 101(9): 1466-1475. [Miocene].
469. Loriga, J., Vasco, A., Regalado, L., Heinrichs, J. & Moran, R. C. 2014. Phylogeny and classification of the Cuban species of *Elaphoglossum* (Dryopteridaceae), with description of *Elaphoglossum* sect. *Wrightiana* sect. nov. Plant Systematics and Evolution 300(5): 937-951.
470. Loss, S. R. & Blair, R. B. 2014. Earthworm invasions and the decline of clubmosses (*Lycopodium* spp.) that enhance nest survival rates of a ground-nesting songbird. Forest Ecology and Management 324: 64-71. [birds, North America].
471. Lumbres, R. I. C., Palaganas, J. A., Micosa, S. C., Laruan, K. A., Besic, E. D., Yun, C. W. & Lee, Y. J. 2014. Floral diversity assessment in Alno communal mixed forest in Benguet, Philippines. Landscape and Ecological Engineering 10(2): 361-368.
472. Luo, C., Chen, M., Xiang, R., Liu, J., Zhang, L., Lu, J. & Yang, M. 2014. Modern pollen distribution in marine sediments from the northern part of the South China Sea. Marine Micropaleontology 108: 41-56. [China, *Dicranopteris*, spore, Taiwan].
473. Luque, G. M., Bellard, C., Bertelsmeier, C., Bonnaud, E., Genovesi, P., Simberloff, D. & Courchamp, F. 2014. The 100th of the world's worst invasive alien species. Biological Invasions 16(5): 981-985. [invasive species, *Salvinia molesta*].
474. Luu, T. D., Truong, P., Mammucari, R. & Foster, N. 2014. A critical review of the arsenic uptake mechanisms and phytoremediation potential of *Pteris vittata*. International Journal of Phytoremediation 16(5): 429-453.

475. Ma, Y., Yao, Y., Yin, X., Yan, Y. & Dai, X. 2014. Study on the characteristics of leaf epidermis of 16 species of Thelypteridaceae. Acta Botanica Boreali Occidentalia Sinica 34(10): 2020-2027. [Chinese].
476. Maddi, F. A. & Cremers, G. 2014. Revision of typifications among some taxa of pteridophytes of Guadeloupe described by A. L. A. Fee upon F. J. L'Herminier's specimens. Adansonia 36(2): 185-203. [*Selaginella mollis*; French].
477. Madhusoodanan, P. V., Prakashkumar, R., Sreerenjini, V. K. & Smitha, R. B. 2014. Ecology of South Indian pteridophytes. Indian Fern Journal 31(1-2): 173-186. [*Azolla pinnata*, conservation, *Cyathea crinita*, *Salvinia molesta*].
478. Madhusoodanan, P. V., Sreerenjini, V. K., Smitha, R. B. & Prakashkumar, R. 2014. Invasion of *Salvinia molesta* D.S. Mitchell (African Payal) in Kerala and its management. Indian Fern Journal 31(1-2): 162-172. [biological control, invasive species].
479. Magrach, A., Rodriguez-Perez, J., Campbell, M. & Laurance, W. F. 2014. Edge effects shape the spatial distribution of lianas and epiphytic ferns in Australian tropical rain forest fragments. Applied Vegetation Science 17(4): 754-764. [biogeography].
480. Maharachchikumbura, S. S. N., Guo, L. D., Chukeatirote, E. & Hyde, K. D. 2014. Improving the backbone tree for the genus *Pestalotiopsis*; addition of *P. steyaertii* and *P. magna sp. nov.* Mycological Progress 13(3): 617-624. [decomposition, France, fungi, *Pteridium*, saprophytes].
481. Mallmann, I. T. & Schmitt, J. L. 2014. Richness and floristic composition of the fern community in riparian forest of the river 'Cadeia', in Rio Grande do Sul state, Brazil. Ciencia Florestal 24(1): 97-109. [biodiversity; Portuguese].
482. Mandal, A., Purakayastha, T. J. & Patra, A. K. 2014. Phytoextraction of arsenic contaminated soil by Chinese brake fern (*Pteris vittata*): Effect on soil microbiological activities. Biology and Fertility of Soils 50(8): 1247-1252. [phytoremediation].
483. Mandal, C., Ghosh, N., Dey, N. & Adak, M. K. 2014. Effects of putrescine on oxidative stress induced by hydrogen peroxide in *Salvinia natans* L. Journal of Plant Interactions 9(1): 550-558.
484. Manubolu, M., Goodla, L., Ravilla, S., Thanasekaran, J., Dutta, P., Malmlof, K. & Obulum, V. R. 2014. Protective effect of *Actiniopteris radiata* (Sw.) Link. against CCl4 induced oxidative stress in albino rats. Journal of Ethnopharmacology 153(3): 744-752. [medicinal plants].
485. Mao, X. X., Liu, X. & Zhang, G. M. 2014. Taxonomic revision of *Adiantum* ser. *venusta* Ching (Pteridaceae) from Pan-Himalayas. Plant Diversity and Resources 36(4): 453-467. [Chinese].
486. Marcon, C., Silveira, T. & Droste, A. 2014. Germination and gametophyte development of *Cyathea corcovadensis* (Raddi) Domin (Cyatheaceae) from spores stored at low temperatures. Acta Scientiarum Biological Sciences 36(4): 403-410. [Brazil, conservation, spore bank].
487. Marcon-Tavares, A. B., Felinto, F., Feitoza, L., Barros e Silva, A. E. & Guerra, M. 2014. Different patterns of chromosomal histone H3 phosphorylation in land plants. Cytogenetic and Genome Research 143(42064): 136-143. [*Acrostichum danaeifolium*].
488. Marmi, J., Vila, B., Martin-Closas, C. & Villalba-Breva, S. 2014. Reconstructing the foraging environment of the latest titanosaurs (Fumanya dinosaur tracksite, Catalonia). Palaeogeography Palaeoclimatology Palaeoecology 410: 380-389. [dinosaurs, fossils, herbivory].
489. Martinez, O. G., Chambi, C. J. & Aviles, Z. 2014. Gametophytic phase of two neotropical ferns, *Dennstaedtia globulifera* (Poir.) Hieron and *Hypolepis poeppigii* Mett. ex Maxon (Dennstaedtiaceae). Plant Systematics and Evolution 300(5): 909-915. [antheridiophore].
490. Martinez, O. G., Tanco, M. E., Prada, C. & Guerra, R. 2014. Gametophytic phase of *Alsophila odonelliana* (Cyatheaceae). Nordic Journal of Botany 32(1): 92-97. [tree ferns].
491. Martinez-Salas, E. & Ramos, C. H. 2014. Biodiversity of pteridophyta in Mexico. Revista Mexicana de Biodiversidad 85: S110-S113. [Spanish].
492. Maruyama, M., Bartolozzi, L., Inui, Y., Tanaka, H. O., Hyodo, F., Shimizu-Kaya, U., Takematsu, Y., Hishi, T. & Itioka, T. 2014. A new genus and species of myrmecophilous brentid beetle (Coleoptera: Brentidae) inhabiting the myrmecophytic epiphytes in the Bornean

rainforest canopy. Zootaxa 3786(1): 73-78. [ant-plant interactions, *Lecanopteris ridleyi*, Malaysia, *Platycerium crustacea*, Sarawak].

493. Masetto, E. & Lorscheitter, M. L. 2014. Palynomorphs in Holocene sediments from a paleolagoon in the coastal plain of extreme southern Brazil. Acta Botanica Brasilica 28(2): 165-175. [spores].
494. Mathews, K. & Collins, B. 2014. Plant and pollinator communities of high elevation rock outcrops. Natural Areas Journal 34(3): 300-309. [competition, North Carolina, *Selaginella*].
495. Matos, F. B. & Mickel, J. T. 2014. The Brazilian species of *Elaphoglossum* section *Polytrichia* (Dryopteridaceae). Brittonia 66(4): 371-395.
496. Matos, F. B. 2014. Typification of some species names in *Elaphoglossum* sect. *Polytrichia* (Dryopteridaceae) from Brazil. Acta Botanica Brasílica 28(3): 404-407.
497. Maumus, F., Epert, A., Nogue, F. & Blanc, G. 2014. Plant genomes enclose footprints of past infections by giant virus relatives. Nature Communications 5: 4268. [*Selaginella moellendorffii*].
498. Mayer, V. E., Frederickson, M. E., McKey, D. & Blatrix, R. 2014. Current issues in the evolutionary ecology of ant-plant symbioses. New Phytologist 202(3): 749-764. [ant-plant interactions, coevolution].
499. Mayser, M. J. & Barthlott, W. 2014. Layers of air in the water beneath the floating fern *Salvinia* are exposed to fluctuations in pressure. Integrative and Comparative Biology 54(6): 1001-1007. [aquatic plants, biophysics].
500. Mayser, M. J., Barthlott, W. & Gilet, T. 2014. The hairy, superhydrophobic surfaces on the water fern *Salvinia* - underwater air retention and raindrop impacts. Annual Meeting of the Society for Integrative and Comparative Biology, Austin, TX, e135.
501. Mazumdar, J. 2014. A new combination in *Arachniodes* (Dryopteridaceae). Phytotaxa 159(1): 26-28. [*Arachniodes polyodon*].
502. Mazumdar, J. 2014. Nomenclatural note on three ferns from India. Phytotaxa 158(3): 297-298. [*Davallodes squamata, Didymoglossum henzaianum, Tectaria nayarii*].
503. McAdam, S. A. M. & Brodribb, T. J. 2014. Separating active and passive influences on stomatal control of transpiration. Plant Physiology 164(4): 1578-1586. [abscisic acid].
504. McHenry, M. A. & Barrington, D. S. 2014. Phylogeny and biogeography of exindusiate Andean *Polystichum* (Dryopteridaceae). American Journal of Botany 101(2): 365-375.
505. McLean, K. L., Dodd, S. L., Minchin, R. F., Ohkura, M., Bienkowski, D. & Stewart, A. 2014. Non-target impacts of the biocontrol agent *Trichoderma atroviride* on plant health and soil microbial communities in two native ecosystems in New Zealand. Australasian Plant Pathology 43(1): 33-45. [*Asplenium gracillimum*].
506. Mcloughlin, S., Jansson, I. M. & Vajda, V. 2014. Megaspore and microfossil assemblages reveal diverse herbaceous lycophytes in the Australian Early Jurassic flora. Grana 53(1): 22-53. [Australia, fossils, Jurassic, *Paxilitriletes rainei*, *Selaginella*].
507. McPherson, T. Y. 2014. Landscape scale species distribution modeling across the Guiana Shield to inform conservation decision making in Guyana. Biodiversity and Conservation 23(8): 1931-1948.
508. Meena, K., Hussain, S. & Yadav, B. L. 2014. Photosynthetic pigments and their degradation under hyperthermia in two species of *Selaginella* Beauv. from Rajasthan. Indian Fern Journal 31(1-2): 118-123. [*Selaginella ciliaris, Selaginella repanda*].
509. Mehltreter, K. 2014. New frontiers of fern ecology. Indian Fern Journal 31(1-2): 1-9.
510. Meinard, Y. & Quetier, F. 2014. Experiencing biodiversity as a bridge over the science-society communication gap. Conservation Biology 28(3): 705-712. [*Polypodium vulgare*].
511. Melendez-Camargo, M. E., Contreras-Leon, I. & Silva-Torres, R. 2014. Diuretic effect of alkaloids fraction extracted from *Selaginella lepidophylla* (Hook. et Grev.) Spring. Boletin Latinoamericano y del Caribe de Plantas Medicinales y Aromaticas 13(1): 92-99.

512. Mendes, M. M., Dinis, J., Pais, J. & Friis, E. M. 2014. Vegetational composition of the early Cretaceous Chicalhao flora (Lusitanian Basin, western Portugal) based on palynological and mesofossil assemblages. Review of Palaeobotany & Palynology 200: 65-81. [fossils].
513. Mendoza-Ruiz, A. & Ceja-Romero, J. 2014. Atlas de briofitas y pteridofitas, 1. ed. Universidad Autónoma Metropolitana, Iztapalapa: México, D.F. pp. 124. [anatomy, morphology, systematics; Spanish]
514. Meunier, J. D., Keller, C., Guntzer, F., Riotte, J., Braun, J. J. & Anupama, K. 2014. Assessment of the 1% Na_2CO_3 technique to quantify the phytolith pool. Geoderma 216: 30-35. [*Equisetum*].
515. Miao, J., Zhou, C. Y., Li, S. J. & Yan, J. H. 2014. Accumulation of soil organic carbon and total nitrogen in *Pinus yunnanensis* forests at different age stages. Chinese Journal of Applied Ecology 25(3): 625-631. [*Pteridium revolutum*, succession; Chinese].
516. Mikkelsen, M. D., Harholt, J., Ulvskov, P., Johansen, I. E., Fangel, J. U., Doblin, M. S., Bacic, A. & Willats, W. G. T. 2014. Evidence for land plant cell wall biosynthetic mechanisms in charophyte green algae. Annals of Botany 114: 1217-1236. [*Selaginella moellendorffii*].
517. Mildenhall, D. C., Kennedy, E. M., Lee, D. E., Kaulfuss, U., Bannister, J. M., Fox, B. & Conran, J. G. 2014. Palynology of the early Miocene Foulden Maar, Otago, New Zealand: diversity following destruction. Review of Palaeobotany & Palynology 204: 27-42. [*Davallia*, fossils, spores].
518. Miller, T. W., Libbey, C. R. & Maupin, B. G. 2014. Comparison of four management programs for control of established perennial weeds in blueberry. In: Van Kooten, O. & Brouns, F. (eds.). X International Symposium on *Vaccinium* and other superfruits, International Society of Horticultural Science: Leuven, Belgium, pp. 147-152. [*Equisetum arvense*, herbicides, Washington].
519. Mimura, T., Mimura, M., Kobayashi, D., Komiyama, C., Sekimoto, H., Miyamoto, M. & Kitamura, A. 2014. Radioactive pollution and accumulation of radionuclides in wild plants in Fukushima. Journal of Plant Research 127(1): 5-10. [caesium, *Equisetum*].
520. Minardi, B. D., Voytena, A. P. L., Santos, M. & Randi, A. M. 2014. Water stress and abscisic acid treatments induce the CAM pathway in the epiphytic fern *Vittaria lineata* (L.) Smith. Photosynthetica 52(3): 404-412. [Brazil, desiccation tolerance].
521. Mirza, N., Mahmood, Q., Shah, M. M., Pervez, A. & Sultan, S. 2014. Plants as useful vectors to reduce environmental toxic arsenic content. Scientific World Journal : 921581. [contamination, phytoremediation, *Pteris vittata*].
522. Mitxelena, A., Saenz, J. & Oreja, L. 2014. Inventory of threatened habitats and flora in Jaizkibel SAC. In: Arizaga, J. (ed.). Revision of the natural heritage of the mountain of Jaizkibel (Gipuzkoa, Basque country). Munibe Monographs, Nature Series Vol. 2. Aranzadi Society of Sciences: Donostia, San Sebastian, pp. 101-109. [conservation, *Dryopteris carthusiana*, Spain; Spanish].
523. Mizuta, T. 2014. Habitat requirements of the endangered Amami thrush (*Zoothera dauma major*), endemic to Amami-Oshima Island, southwestern Japan. Wilson Journal of Ornithology 126(2): 298-304. [birds, epiphytes, nesting habitat].
524. Mochizuki, T., Tani, A., Takahashi, Y., Saigusa, N. & Ueyama, M. 2014. Long-term measurement of terpenoid flux above a *Larix kaempferi* forest using a relaxed eddy accumulation method. Atmospheric Environment 83: 53-61. [*Dryopteris crassirhizoma*, Japan].
525. Moore, L. C., Wittry, J. & DiMichele, W. A. 2014. The Okmulgee, Oklahoma fossil flora, a Mazon Creek equivalent: Spatial conservatism in the composition of Middle Pennsylvanian wetland vegetation over 1100 km. Review of Palaeobotany & Palynology 200: 24-52. [Carboniferous, *Lobatopteris*].
526. Moran, R. C., Labiak, P. H., Hanks, J. G. & Prado, J. 2014. The phylogenetic relationship of *Tectaria brauniana* and *Tectaria nicotianifolia*, and the recognition of *Hypoderris* (Tectariaceae). Systematic Botany 39(2): 384-395.

527. Moran, R. C., Prado, J. & Sundue, M. A. 2014. *Megalastrum* (Dryopteridaceae) in Andean South America, Part II. American Fern Journal 104(4): 181-236.
528. Moran, R. C., Prado, J. & Sundue, M. A. 2014. *Megalastrum* (Dryopteridaceae) in Andean South America, Part I. American Fern Journal 104(3): 109-178.
529. Morris, J. L. & Edwards, D. 2014. An analysis of vegetational change in the Lower Devonian: New data from the Lochkovian of the Welsh Borderland, UK. Review of Palaeobotany & Palynology 211: 28-54. [fossils, lycophytes, *Zosterophyllum*].
530. Morrone, J. J. 2014. Cladistic biogeography of the neotropical region: identifying the main events in the diversification of the terrestrial biota. Cladistics 30(2): 202-214. [Amazonia, evolution, South America].
531. Mroz, E., Depa, L., Artchawakom, T. & Gorczyca, J. 2014. *Micromyzus platycerii* sp. n. (Hemiptera, Aphididae) - a new fern-feeding aphid species from Thailand. ZooKeys (456): 49-57. [herbivory].
532. Mukherjee, A., Knutson, A., Hahn, D. A. & Heinz, K. M. 2014. Biological control of giant salvinia (*Salvinia molesta*) in a temperate region: cold tolerance and low temperature oviposition of *Cyrtobagous salviniae*. BioControl 59(6): 781-790.
533. Mullah, C. J. A., Klanderud, K., Totland, O. & Odee, D. 2014. Community invasibility and invasion by non-native *Fraxinus pennsylvanica* trees in a degraded tropical forest. Biological Invasions 16(12): 2747-2755.
534. Murphy, M. J., Inman-Narahari, F., Ostertag, R. & Litton, C. M. 2014. Invasive feral pigs impact native tree ferns and woody seedlings in Hawaiian forest. Biological Invasions 16(1): 63-71. [*Cibotium*, herbivory].
535. Murrieta-Galindo, R., Parra-Olea, G., Gonzalez-Romero, A., Lopez-Barrera, F. & Vredenburg, V. T. 2014. Detection of *Batrachochytrium dendrobatidis* in amphibians inhabiting cloud forests and coffee agroecosystems in central Veracruz, Mexico. European Journal of Wildlife Research 60(3): 431-439. [bioindicators, conservation].
536. Muthukumar, T., Sathiyaraj, G., Priyadharsini, P., Uma, E. & Sathiyadash, K. 2014. Arbuscular mycorrhizal and dark septate endophyte fungal associations in ferns and lycophytes of Palni Hills, Western Ghats, southern India. Brazilian Journal of Botany 37(4): 561-581.
537. Muthuraja, R., Muthukumar, T., Sathiyadash, K., Uma, E. & Priyadharsini, P. 2014. Arbuscular mycorrhizal (AM) and dark septate endophyte (DSE) fungal association in lycophytes and ferns of the Kolli Hills, Eastern Ghats, Southern India. American Fern Journal 104(2): 67-102.
538. Nagalingum, N. S., Knerr, N., Mishler, B. D. & Cargill, D. C. 2014. Overlapping fern and bryophyte hotspots: assessing ferns as a predictor of bryophyte diversity. Telopea 17: 383-392. [Australia, biogeography, floristics, surrogates].
539. Nakata, M. 2014. A correct representation of the chromosome numbers at meiosis. Journal of Japanese Botany 89(1): 48-50. [terminology; Japanese].
540. Narvaez, P. L., Pramparo, M. B. & Sabino, I. F. 2014. First palynologic record of the Cretaceous La Yesera Formation (Salta Group), northwestern Argentina. Revista Brasileira de Paleontologia 17(2): 141-156. [fossils].
541. Naugolnykh, S. V. 2014. Fossil flora from the Aleksandrovskoe locality (Lower Permian, Kungurian; Krasnoufimsk district of the Sverdlovsk Region): taxonomical composition, taphonomy, and a new lycopsid representative. Paleontological Journal 48(2): 209-217. [Carboniferous, fossils, Russia].
542. Nawar, K. & Sharma, O. P. 2014. Ethno-medicinal plants used in the treatment of fever by tribes of Hindoli Tehsil, Bundi District (Rajasthan). Advances in Plant Sciences 27(1): 141-142.
543. Neil, K., Gajewski, K. & Betts, M. 2014. Human-ecosystem interactions in relation to Holocene environmental change in Port Joli Harbour, southwestern Nova Scotia, Canada. Quaternary Research 81(2): 203-212. [fossils, Holocene, *Isoetes*].

544. Nemoto, M. & Otsuka, H. 2014. Influence of farming system on the floristic composition of paddy landscapes: a case study in a rural hilly zone in Zhejiang province, China. Landscape and Ecological Engineering 10(1): 173-180. [*Marsilea quadrifolia*].

545. Nettesheim, F. C., Damasceno, E. R. & Sylvestre, L. S. 2014. Different slopes of a mountain can determine the structure of ferns and lycophytes communities in a tropical forest of Brazil. Anais da Academia Brasileira de Ciencias 86(1): 199-210. [biodiversity, indicator species, plant communities, slope].

546. Neumann, M. K., Schneider, P. H. & Schmitt, J. L. 2014. Phenology, caudex growth and age estimation of *Cyathea corcovadensis* (Raddi) Domin (Cyatheaceae) in a subtropical forest in southern Brazil. Acta Botanica Brasilica 28(2): 274-280. [phenology, plant age, trunk growth].

547. Newman, M., Mitchell, F. J. G. & Kelly, D. L. 2014. Exclusion of large herbivores: long-term changes within the plant community. Forest Ecology and Management 321: 136-144. [*Pteridium aquilinum*].

548. Newton, J. N., Tomlin, F. M. & Sarpong, R. 2014. Progress toward the synthesis of alkaloids from *Lycopodiastrum casuarinoides* via late-stage C-H functionalization of lycodine derivatives. 247th National Spring Meeting of the American Chemical Society (ACS), Dallas, TX, p. 598. [medicinal plants].

549. Ngan, T. L., Zhang, L. & Zhang, L. B. 2014. *Polystichum hagiangense* (subg. Haplopolystichum; Dryopteridaceae), a new fern species from Ha Giang Province, northern Vietnam. Phytotaxa 175(5): 293-297.

550. Ngan, T. L., Zhang, L. & Zhang, L. B. 2014. Ten new records of *Polystichum* (Dryopteridaceae) for Vietnam and lectotypification of *Polystichum atroviridissimum* and *P. fimbriatum*. Phytotaxa 164(2): 115-123.

551. Nguyen, N. C., Bui, H. T., Tran, C. L., Tran, M. H., Nguyen, H. D. & Nguyen, T. D. 2014. Anti-amnesic effect of alkaloid fraction from *Lycopodiella cernua* (L.) Pic. Serm. on scopolamine-induced memory impairment in mice. Neuroscience Letters 575: 42-46.

552. Nhamo, N., Kyalo, G. & Dinheiro, V. 2014. Exploring options for lowland rice intensification under rain-fed and irrigated ecologies in east and southern Africa: the potential application of integrated soil fertility management principles. In: Sparks, D. L. (ed.). Advances in Agronomy Vol. 128. Elsevier: San Diego, CA, pp. 181-219. [*Azolla*, fertilization, land management].

553. Niu, S., Yuan, L., Zhang, Y., Chen, X. & Li, W. 2014. Isolation and expression profiles of gibberellin metabolism genes in developing male and female cones of *Pinus tabuliformis*. Functional & Integrative Genomics 14(4): 697-705. [*Selaginella moellendorffii*].

554. Noraini, T., Amirul-Aiman, A. J., Jaman, R., Nor-Fairuz, A. R., Maideen, H., Damanhuri, A. & Ruzi, A. R. 2014. Systematic significance of stipe anatomy in peninsular Malaysian *Blechnum* L. (Blechnaceae) species. Malaysian Applied Biology 43(2): 119-128.

555. Noubarani, M., Rostamkhani, H., Erfan, M., Kamalinejad, M., Eskandari, M. R., Babaeian, M. & Salamzadeh, J. 2014. Effect of *Adiantum capillus-veneris* Linn. on an animal model of testosterone-induced hair loss. Iranian Journal of Pharmaceutical Research 13: 113-118. [medicinal plants].

556. Nunez, P., Lino, G., Mendoza, A., Villarreal, M. L. & Taketa, A. 2014. Antiproliferative, antibacterial and inhibition of MAO-A activities of some selected Mexican ferns. 55th Annual Meeting of the American Society of Pharmacognosy (ASP), Oxford, MS, p. 796. [*Arachniodes denticulata, Dennstaedtia globulifera, Dryopteris wallichiana, Pleopeltis plebeia*].

557. Nurul, H. M. R., Yong, K. T., Osman, N. & Nasrulhaq-Boyce, A. 2014. Leaf photosynthetic characteristics in eight shaded Malaysian filmy ferns. Phyton 83: 353-361. [Hymenophyllaceae].

558. Nuttle, T., Ristau, T. E. & Royo, A. A. 2014. Long-term biological legacies of herbivore density in a landscape-scale experiment: forest understoreys reflect past deer density treatments for at least 20 years. Journal of Ecology 102(1): 221-228. [*Dennstaedtia punctilobula*, fern cover, herbivory, Pennsylvania, *Thelypteris noveboracensis*].

559. Obermuller, F. A., Freitas, L., Daly, D. C. & Silveira, M. 2014. Patterns of diversity and gaps in vascular (hemi-) epiphyte flora of Southwestern Amazonia. Phytotaxa 166(4): 259-272.
560. Oborny, B. & Hubai, A. G. 2014. Patch size and distance: modelling habitat structure from the perspective of clonal growth. Annals of Botany 114(2): 389-398. [clonal growth, *Lycopodium annotinum*].
561. Odland, A. 2014. Habitat preferences of some red-listed alpine plants in Scandinavia. Nordic Journal of Botany 32(3): 337-346. [conservation, Norway, Sweden].
562. Ogilvie, H. A., Imin, N. & Djordjevic, M. A. 2014. Diversification of the C-terminally encoded peptide (CEP) gene family in angiosperms, and evolution of plant-family specific CEP genes. BMC Genomics 15: 870. [*Selaginella*].
563. Oke, O. A., Heard, S. B. & Lundholm, J. T. 2014. Integrating phylogenetic community structure with species distribution models: an example with plants of rock barrens. Ecography 37(7): 614-625. [Canada, *Pteridium aquilinum*].
564. Olaifa, F. E. & Omekam, A. J. 2014. Studies on phytoremediation of copper using *Pteridium aquilinum* (bracken fern) in the presence of biostimulants and bioassay using *Clarias gariepinus* juveniles. International Journal of Phytoremediation 16(3): 219-234.
565. Oldenkott, B., Yamaguchi, K., Tsuji-Tsukinoki, S., Knie, N. & Knoop, V. 2014. Chloroplast RNA editing going extreme: more than 3400 events of C-to-U editing in the chloroplast transcriptome of the lycophyte *Selaginella uncinata*. RNA (Cold Spring Harbor) 20(10): 1499-1506.
566. Oliveira, P. R. R., Neto, M. N., Christianini, A. V. & Francisco, M. R. 2014. On the nest, eggs, and hatchlings of the Yellow-legged thrush *Turdus flavipes flavipes* in Brazilian Atlantic Forest. Revista Brasileira de Ornitologia 22(1): 53-56. [birds, epiphytes, nesting material, rhizomes].
567. Oppenheimer, H. L. & Bustamante, K. M. 2014. Rediscovery, ecology, and habitat of *Deparia kaalaana* (Copel.) M. Kato (Athyriaceae). American Fern Journal 104(2): 103-107. [Hawaii].
568. Ordonez, A. 2014. Global meta-analysis of trait consistency of non-native plants between their native and introduced areas. Global Ecology and Biogeography 23(3): 264-273. [alien species, invasive species, plant traits].
569. Orlova, O. A. & Jurina, A. L. 2014. A new articulate species, *Pseudobornia schweitzeri* Jurina et O. Orlova, sp. nov., from the upper Devonian of Northern Timan, Russia. Paleontological Journal 48(1): 90-100. [fossils, Russia].
570. Osorio-Zuniga, F., Fonturbel, F. E. & Rydin, H. 2014. Evidence of mutualistic synzoochory between cryptogams and hummingbirds. Oikos 123(5): 553-558. [dispersal, fern-animal interactions, hummingbirds, *Lophosoria quadripinnata*, mutualism, nesting material].
571. Ostertag, R., Inman-Narahari, F., Cordell, S., Giardina, C. P. & Sack, L. 2014. Forest structure in low-diversity tropical forests: a study of Hawaiian wet and dry forests. PLoS One 9(8): e103268. [*Cibotium*].
572. Pacyna, G. 2014. Plant remains from the Polish Triassic. Present knowledge and future prospects. Acta Palaeobotanica 54(1): 3-33. [fossils].
573. Page, C. & Gureyeva, I. 2014. Hardiness as a component of both horticultural success and wild-plant range-determination in Pteridophyta. Pteridologist 6(1): 2-7.
574. Page, C. N., Collinson, M. E. & Van Konijnenburg-Van Cittert, J. H. A. 2014. *Lygodium hians* E. Fournier (Pteridophyta, Schizaeales) - an endemic unusual ground-clothing member of a modern climbing fern genus in New Caledonia. Adansonia 36(1): 21-43.
575. Pampurova, S. & Van Dijck, P. 2014. The desiccation tolerant secrets of *Selaginella lepidophylla*: What we have learned so far? Plant Physiology and Biochemistry 80: 285-290.
576. Pampurova, S., Verschooten, K., Avonce, N. & Van Dijck, P. 2014. Functional screening of a cDNA library from the desiccation-tolerant plant *Selaginella lepidophylla* in yeast mutants identifies trehalose biosynthesis genes of plant and microbial origin. Journal of Plant Research 127(6): 803-813.

577. Pan, H., Jiang, B., Chen, J. & Jin, Z. 2014. Assessment of the physical, mechanical, and moisture-retention properties of pullulan-based ternary co-blended films. Carbohydrate Polymers 112: 94-101. [*Matteuccia struthiopteris*].
578. Pan, K., Luo, J. G. & Kong, L. Y. 2014. A new *Lycopodium* alkaloid from *Phlegmariurus fargesii*. Chinese Journal of Natural Medicines 12(5): 373-376. [medicinal plants].
579. Panwar, A. S. 2014. Integrated nutrient management for sustaining wetland rice (*Oryza sativa*) production in mid hills altitude of Meghalaya. Indian Journal of Agricultural Sciences 84(7): 828-831. [*Azolla*].
580. Pardoe, H. S. 2014. Surface pollen deposition on glacier forelands in southern Norway II: Spatial patterns across the Jotunheimen-Jostedalsbreen region. Holocene 24(12): 1675-1685. [*Equisetum*, spores].
581. Parris, B. S. 2014. *Oreogrammitis setosa* and *O. sinohirtella* in Thailand. Fern Gazette 19: 296.
582. Patil, S. & Dongare, M. 2014. The genus *Ophioglossum* from Western Ghats of India. Indian Fern Journal 31(42036): 17-26.
583. Patil, S., Yadav, S. & Dongare, M. 2014. *Tectaria fuscipes* (Tectariaceae, Pteridophyta), a new record for southern India. Journal of Japanese Botany 89(3): 186-188.
584. Patino, J., Carine, M., Fernandez-Palacios, J. M., Otto, R., Schaefer, H. & Vanderpoorten, A. 2014. The anagenetic world of spore-producing land plants. New Phytologist 201(1): 305-311. [anagenetic speciation, endemism, island biogeography, oceanic archipelagos].
585. Patino, J., Weigelt, P., Guilhaumon, F., Kreft, H., Triantis, K. A., Naranjo-Cigala, A., Solymos, P. & Vanderpoorten, A. 2014. Differences in species-area relationships among the major lineages of land plants: a macroecological perspective. Global Ecology and Biogeography 23(11): 1275-1283. [biogeography].
586. Paul, R., Sen, T., Sen, U. & Rahaman, S. 2014. Effect of heavy metal pollution on stomata of juvenile sporophytes of some ferns of Gangetic Westbengal. Indian Fern Journal 31(1-2): 27-39. [cadmium, *Ceratopteris thalictroides*, lead, mercury, *Nephrolepis cordifolia*, *Pteris vittata*].
587. Paul, S. K., Dixon, K. W. & Miller, B. P. 2014. The persistence and germination of fern spores in fire-prone, semi-arid environments. Australian Journal of Botany 62(6): 518-527. [*Cheilanthes adiantoides*, *Cheilanthes austrotenuifolia*, *Cheilanthes sieberi*, spore bank].
588. Pawlowska, J., Wilk, M., Sliwinska-Wyrzychowska, A., Metrak, M. & Wrzosek, M. 2014. The diversity of endophytic fungi in the above-ground tissue of two *Lycopodium* species in Poland. Symbiosis 63(2): 87-97. [*Lycopodium annotinum*, *Lycopodium clavatum*].
589. Pearman, D. A., Rumsey, F. J. & Bennallick, I. J. 2014. Monitoring change in *Isoetes histrix* Bory (Isoetaceae) at its northern distributional limit. Fern Gazette 19: 297-306. [conservation, UK].
590. Pellatt, J. 2014. A frond in read is a frond indeed! Pteridologist 6(1): 77-78.
591. Pence, V. C. 2014. *In vitro* propagation and cryopreservation of the endangered filmy fern, *Trichomanes punctatum* subsp. *floridanum* (Hymenophyllaceae). Fern Gazette 19: 307-317. [tissue culture].
592. Peng, D., Gu, X., Xue, L. J., Leebens-Mack, J. H. & Tsai, C. J. 2014. Bayesian phylogeny of sucrose transporters: ancient origins, differential expansion and convergent evolution in monocots and dicots. Frontiers in Plant Science 5: e615. [carbohydrates, *Selaginella moellendorffii*].
593. Peppe, D. J., Lemons, C. R., Royer, D. L., Wing, S. L., Wright, I. J., Lusk, C. H. & Rhoden, C. H. 2014. Biomechanical and leaf-climate relationships: a comparison of ferns and seed plants. American Journal of Botany 101(2): 338-347. [fossils, leaf traits, paleoclimate].
594. Peralta Pelaez, L. A., Moreno-Casasola, P. & Lopez Rosas, H. 2014. Hydrophyte composition of dune lakes and its relationship to land-use and water physicochemistry in Veracruz, Mexico. Marine and Freshwater Research 65(4): 312-326. [*Acrostichum aureum*].

595. Pereira, A. L. & Vasconcelos, V. 2014. Classification and phylogeny of the cyanobiont *Anabaena azollae* Strasburger: an answered question? International Journal of Systematic and Evolutionary Microbiology 64: 1830-1840.
596. Perez-Paredes, M. G., Sanchez-Gonzalez, A. & Tejero-Diez, J. D. 2014. Population structure and habitat traits of two Cyatheaceae species of Hidalgo state, Mexico. Botanical Sciences 92(2): 259-271. [*Alsophila firma, Cyathea fulva*, demography; Spanish].
597. Perrie, L. R., Shepherd, L. D., Thouvenot, L. & von Konrat, M. 2014. Chloroplast DNA sequences support the transfer of the New Caledonian endemic fern *Sphenomeris alutacea* to *Odontosoria*. New Zealand Journal of Botany 52(3): 310-314.
598. Perrie, L. R., Wilson, R. K., Shepherd, L. D., Ohlsen, D. J., Batty, E. L., Brownsey, P. J. & Bayly, M. J. 2014. Molecular phylogenetics and generic taxonomy of Blechnaceae ferns. Taxon 63(4): 745-758. [*Blechnum, Salpichlaena, Stenochlaena, Telmatoblechnum*].
599. Peruzzi, L. & Bedini, G. 2014. Online resources for chromosome number databases. Caryologia 67(4): 292-295. [*Ophioglossum reticulatum*].
600. Peruzzi, L., Caparelli, K. F. & Bedini, G. 2014. A new index for the quantification of chromosome number variation: An application to selected animal and plant groups. Journal of Theoretical Biology 353: 55-60. [*Ophioglossum reticulatum*, polyploidy].
601. Petit, D., Mostacero, J. & Varela, C. 2014. New records of lycophytes (Lycophyta) and ferns (Monilophyta) in the Yurubi National Park, State of Yaracuy, Venezuela. Boletin del Centro de Investigaciones Biologicas Universidad del Zulia 48(2): 131-146. [*Asplenium incuntatum, Danaea moritziana*; Spanish].
602. Petraglia, A., De Benedictis, M., Degola, F., Pastore, G., Calcagno, M., Ruotolo, R., Mengoni, A. & di Toppi, L. S. 2014. The capability to synthesize phytochelatins and the presence of constitutive and functional phytochelatin synthases are ancestral (plesiomorphic) characters for basal land plants. Journal of Experimental Botany 65(4): 1153-1163. [*Selaginella denticulata*].
603. Pikabea, I., Albisu, G. & Aizpuru, I. 2014. New places for endangered plants in Jaizkibel mountain. In: Arizaga, J. (ed.). Revision of the natural heritage of the mountain of Jaizkibel (Gipuzkoa, Basque country). Munibe Monographs, Nature Series Vol. 2. Aranzadi Society of Sciences: Donostia, San Sebastian, pp. 119-121. [conservation, *Hymenophyllum tunbridgense*, Spain, *Vandenboschia speciosa*; Spanish].
604. Pineiro, M. R. & Morbelli, M. A. 2014. Spore morphology and wall ultrastructure in Equisetaceae spores (Equisetopsida) from north-western Argentina. Boletin de la Sociedad Argentina de Botanica 49(1): 35-40. [*Equisetum bogotense, Equisetum giganteum*; Spanish].
605. Plackett, A. R. G., Huang, L., Sanders, H. L. & Langdale, J. A. 2014. High-efficiency stable transformation of the model fern species *Ceratopteris richardii* via microparticle bombardment. Plant Physiology 165(1): 3-14. [*Ceratopteris thalictroides*, transgenic lines].
606. Pluchon, N., Hugelius, G., Kuusinen, N. & Kuhry, P. 2014. Recent paludification rates and effects on total ecosystem carbon storage in two boreal peatlands of northeast European Russia. Holocene 24: 1126-1136. [*Equisetum*].
607. Poinar, G., Jr. 2014. Insect herbivores of horsetails: bionomics, dispersal, and co-evolution. American Entomologist 60(4): 235-240. [*Equisetum*, herbivory].
608. Possart, A., Fleck, C. & Hiltbrunner, A. 2014. Shedding (far-red) light on phytochrome mechanisms and responses in land plants. Plant Science 217: 36-46.
609. Pott, C. 2014. The upper Triassic flora of Svalbard. Acta Palaeontologica Polonica 59(3): 709-740. [fossils, Norway].
610. Pott, C., Guhl, M. & Lehmann, J. 2014. The early Cretaceous flora from the Wealden facies at Duingen, Germany. Review of Palaeobotany & Palynology 201: 75-105. [fossils].
611. Prado, J. & Hirai, R. Y. 2014. Biogeography of the Brazilian Atlantic Forest: evidence from phylogenetic data sets and perspectives for fern and lycophyte studies. Fern Gazette 19: 241-258.

612. Prado, J., Hirai, R. Y. & Smith, A. R. 2014. *Dryopteris huberi* (Dryopteridaceae), an overlooked species, and a key for the species of *Dryopteris* in Brazil. Brittonia 66(4): 340-346.
613. Prestianni, C. & Gess, R. W. 2014. The rooting system of *Leptophloeum* Dawson: new material from the upper Devonian, Famennian Witpoort Formation of South Africa. Review of Palaeobotany & Palynology 209: 35-40. [rhizomorphs].
614. Pyner, T. 2014. A gemmiferous form of *Asplenium lobatum* Pappe & Rawson found in South Africa. Pteridologist 6(1): 36-37.
615. Pyner, T. 2014. *Dryopteris labordei* 'Golden mist'. Pteridologist 6(1): 61-63.
616. Qi, L. H., Liang, C. Q., Mao, C., Qin, X. S., Fan, S. H., Du, W. W. & Kong, X. H. 2014. Species composition and geographic elements of the tropical lowland secondary rain forest of Ganshiling, Hainan Island, China. Chinese Journal of Ecology 33(4): 922-929. [Chinese].
617. Qian, Z. M. & Ke, Y. 2014. Huperzine A: is it an effective disease-modifying drug for Alzheimer's disease? Frontiers in Aging Neuroscience 6: 216. [*Huperzia serrata*, medicinal plants].
618. Qiao, X., Lin, X. H., Liang, Y. H., Dong, J., Guo, D. A. & Ye, M. 2014. Comprehensive chemical analysis of the rhizomes of *Drynaria fortunei* by orthogonal pre-separation and liquid chromatography mass spectrometry. Planta Medica 80(4): 330-336. [medicinal plants].
619. Quaresma, A. C. & Goncalves Jardim, M. A. 2014. Floristic composition and spatial distribution of vascular epiphytes in the restingas of Maracana, Brazil. Acta Botanica Brasilica 28(1): 68-75.
620. Qureshi, R., Shaheen, H., Ilyas, M., Ahmed, W. & Munir, M. 2014. Phytodiversity and plant life of Khanpur dam, Khyber Pakhtunkhwa, Pakistan. Pakistan Journal of Botany 46(3): 841-849.
621. Rajurkar, N. S. & Gaikwad, K. N. 2014. Identification and quantification of amino acids from medicinally important plants by using high-performance thin-layer chromatography. Journal of Liquid Chromatography & Related Technologies 37(15): 2197-2205. [*Adiantum capillus-veneris*, medicinal plants].
622. Rakotondrainibe, F., Hemp, A. & Meyer, S. 2014. *Adiantum papilio* Rakotondr. & Hemp, sp. nov. (Pteridophyta, Pteridaceae), a new endemic species from Madagascar. Adansonia 36(1): 15-20. [French].
623. Ramirez, C., Ortiz, I., San Martin, C., Vidal, O., Alvarez, M., Perez, Y., Solis, J. L. & Alvarez, I. 2014. Preliminary study of the terrestrial plant biodiversity of the Estero Walker (Region of Aysen, Chile): Using baselines of investment projects. Gayana Botanica 71(2): 227-245. [Spanish].
624. Ramirez-Barahona, S. & Eguiarte, L. E. 2014. Changes in the distribution of cloud forests during the last glacial predict the patterns of genetic diversity and demographic history of the tree fern *Alsophila firma* (Cyatheaceae). Journal of Biogeography 41(12): 2396-2407.
625. Ramirez-Rodriguez, R. & Amich, F. 2014. Notes on rare and threatened flora in western-central Iberia. Lazaroa 35: 221-226. [*Adiantum capillus-veneris*, conservation, Spain].
626. Ramos Giacosa, J. P. 2014. Abnormal spore morphology and wall ultrastructure in *Anemia tomentosa* var. *anthriscifolia* and *A. tomentosa* var. *tomentosa* (Anemiaceae). Plant Systematics and Evolution 300(7): 1571-1578.
627. Randi, A. M., Freitas, M. C. A., Rodrigues, A. C., Maraschin, M. & Torres, M. A. 2014. Acclimation and photoprotection of young gametophytes of *Acrostichum danaeifolium* to UV-B stress. Photosynthetica 52(1): 50-56. [mangroves].
628. Rangabhashiyam, S., Suganya, E., Selvaraju, N. & Varghese, L. A. 2014. Significance of exploiting non-living biomaterials for the biosorption of wastewater pollutants. World Journal of Microbiology & Biotechnology 30(6): 1669-1689. [*Azolla filiculoides*].
629. Ranil, R. H. G., Pushpakumara, D. K. N. G., Premakantha, K. T., Bostock, P. D. & Ebihara, A. 2014. Naturalization of *Dicksonia antartica* Labill. in Pidurutalagala Mountain Forest Reserve

and adjacent eucalyptus plantation in Sri Lanka. Bulletin of the National Museum of Nature and Science, Series B 40 (3): 107-112.

630. Ranil, R. H. G., Pushpakumara, D. K. N. G., Wijesundara, D. S. A. & Fernando, S. S. 2014. Eco-geographic survey of tree ferns of Sri Lanka. 6th Asian Fern Symposium, Bali Botanic Garden, Indonesia.
631. Rayamajhi, M. B., Pratt, P. D., Leidi, J. & Center, T. D. 2014. *Austromusotima camptozonale* (Lepidoptera: Crambidae) herbivory results in frond and rhizome mortality of the invasive fern *Lygodium microphyllum* (Schizaeales: Lygodiaceae). Florida Entomologist 97(4): 1308-1316. [biological control, herbivory, invasive species].
632. Reed, J. 2014. West Dean Gardens. Pteridologist 6(1): 74-75.
633. Reger, B., Mellert, K. H. & Ewald, J. 2014. Indicator species of nutrient-poor sites in mountain forests of the Bavarian Alps. Tuexenia (34): 39-51. [Germany, *Huperzia selago*; German].
634. Reiner, W. B., Petzinger, C., Power, M. L., Hyeroba, D. & Rothman, J. M. 2014. Fatty acids in Mountain gorilla diets: implications for primate nutrition and health. American Journal of Primatology 76(3): 281-288. [*Cyathea manniana*, herbivory, primates].
635. Ren, Z., He, C., Fan, Y., Guo, L., Si, H., Wang, Y., Shi, Z. & Zhang, H. 2014. Immuno-enhancement effects of ethanol extract from *Cyrtomium macrophyllum* (Makino) Tagawa on cyclophosphamide-induced immunosuppression in BALB/c mice. Journal of Ethnopharmacology 155(1): 769-775.
636. Ren, Z., He, C., Fan, Y., Si, H., Wang, Y., Shi, Z., Zhao, X., Zheng, Y., Liu, Q. & Zhang, H. 2014. Immune-enhancing activity of polysaccharides from *Cyrtomium macrophyllum*. International Journal of Biological Macromolecules 70: 590-595. [medicinal plants].
637. Reshetnikova, N. M. & Voronkina, N. V. 2014. A record of *Diplazium sibiricum* (Turcz. ex G. Kunze) Kurata in Kaluga province. Bulletin of the Moscow Society of Naturalists, Biological Section 119: 67-68. [Russian].
638. Richardson, S. J., Holdaway, R. J. & Carswell, F. E. 2014. Evidence for arrested successional processes after fire in the Waikare River catchment, Te Urewera. New Zealand Journal of Ecology 38(2): 221-229. [deer, fire ecology, herbivory, tree ferns].
639. Rickard, M. 2014. Fern exploration in the high Andes. Pteridologist 6(1): 24-30. [Ecuador].
640. Riding, J. B. & Dettmann, M. E. 2014. The first Australian palynologist: Isabel Clifton Cookson (1893-1973) and her scientific work. Alcheringa 38(1): 97-129.
641. Rincon Baron, E. J., Rolleri, C. H., Alzate Guarin, F. & Dorado Galvez, J. M. 2014. Ontogeny of the sporangium, spore formation and cytochemistry in Colombian Lycopodials (Lycopodiaceae). Revista de Biologia Tropical 62(1): 273-298. [Colombia, developmental biology; Spanish].
642. Rincon Baron, E. J., Rolleri, C. H., Passarelli, L. M., Espinosa Matias, S. & Torres G., A. M. 2014. Sporogenesis, sporoderm and mature spore ornamentation in Lycopodiaceae. Revista de Biologia Tropical 62(3): 1161-1195. [developmental biology; Spanish].
643. Ritchie, R. J. & Runcie, J. W. 2014. A portable reflectance-absorptance-transmittance meter for photosynthetic work on vascular plant leaves. Photosynthetica 52(4): 614-626. [photobiology].
644. Rizk, Y. S., Fischer, A., Cunha, M. D. C., Rodrigues, P. O., Silva Marques, M. C., Cepa Matos, M. D. F., Toffoli Kadri, M. C., Carollo, C. A. & Pinto de Arruda, C. C. 2014. *In vitro* activity of the hydroethanolic extract and biflavonoids isolated from *Selaginella sellowii* on *Leishmania amazonensis*. Memorias do Instituto Oswaldo Cruz 109(8): 1050-1056. [Amazonia, medicinal plants].
645. Roberts, A. E., Boylen, C. W. & Nierzwicki-Bauer, S. A. 2014. Effects of lead accumulation on the *Azolla caroliniana-Anabaena* association. Ecotoxicology and Environmental Safety 102: 100-104.
646. Robinson, N. M., Leonard, S. W. J., Bennett, A. F. & Clarke, M. F. 2014. Refuges for birds in fire-prone landscapes: the influence of fire severity and fire history on the distribution of forest

birds. Forest Ecology and Management 318: 110-121. [Australia, *Cyathea australis*, *Dicksonia antarctica*, *Pteridium esculentum*].

647. Rocha, L. D., Da Costa, G. M., Gehlen, G., Droste, A. & Schmitt, J. L. 2014. Morphometric differences of *Microgramma squamulosa* (Kaulf.) de la Sota (Polypodiaceae) leaves in environments with distinct atmospheric air quality. Anais da Academia Brasileira de Ciencias 86(3): 1137-1146. [atmospheric pollution, Brazil, indicator species, morphology, Rio Grande do Sul].
648. Rodgers, L., Pernas, T. & Hill, S. D. 2014. Mapping invasive plant distributions in the Florida Everglades using the digital aerial sketch mapping technique. Invasive Plant Science and Management 7(2): 360-374. [invasive species, *Lygodium microphyllum*].
649. Rofkar, J. R., Dwyer, D. F. & Bobak, D. M. 2014. Uptake and toxicity of arsenic, copper, and silicon in *Azolla caroliniana* and *Lemna minor*. International Journal of Phytoremediation 16(2): 155-166.
650. Rojas-Alvarado, A. F. & Chaves-Fallas, J. M. 2014. New records of *Pteris* (Pteridaceae) from the neotropics. Revista Mexicana de Biodiversidad 85(1): 301-303.
651. Rojas-Alvarado, A. F. & Sanin, D. 2014. Two new species of *Tectaria* (Tectariaceae) from Costa Rica, Panama and Colombia. Anales del Jardin Botanico de Madrid 71(1): e004. [*Tectaria lacinifolia*, *Tectaria pardalina*; Spanish].
652. Rosenthal, M. A., Rosenthal, S. R., Johnson, G., Taylor, W. C. & Zimmer, E. A. 2014. *Isoetes viridimontana*: a previously unrecognized quillwort from Vermont, USA. American Fern Journal 104(1): 7-15.
653. Roshchina, V. V. & Yashin, V. A. 2014. Neurotransmitters catecholamines and histamine in allelopathy: plant cells as models in fluorescence microscopy. Allelopathy Journal 34(1): 1-15. [*Equisetum arvense*].
654. Rosleine, D., Suzuki, E., Sundawiati, A., Septiana, W. & Ekawati, D. 2014. The effect of land use history on natural forest rehabilitation at corridor area of Gunung Halimun Salak National Park, West Java, Indonesia. Reinwardtia 14(1): 85-99. [*Cyathea*, *Dicranopteris linearis*].
655. Rossi, G., Ferrarini, A., Dowgiallo, G., Carton, A., Gentili, R. & Tomaselli, M. 2014. Detecting complex relations among vegetation, soil and geomorphology. An in-depth method applied to a case study in the Apennines (Italy). Ecological Complexity 17: 87-98. [*Cryptogramma crispa*, plant-soil interactions].
656. Rothfels, C. J. & Schuettpelz, E. 2014. Accelerated rate of molecular evolution for vittarioid ferns is strong and not driven by selection. Systematic Biology 63(1): 31-54. [*Adiantum*, *Calciphilopteris*, molecular clock, nucleotide substitution rate].
657. Rothfels, C. J., Johnson, A. K., Windham, M. D. & Pryer, K. M. 2014. Low-copy nuclear data confirm rampant allopolyploidy in the Cystopteridaceae (Polypodiales). Taxon 63(5): 1026-1036. [*Cystopteris*, *Gymnocarpium*].
658. Rouhan, G. & Gaudeul, M. 2014. Plant taxonomy: a historical perspective, current challenges, and perspectives. In: Besse, P. (ed.). Molecular plant taxonomy: methods and protocols. Humana Press: Totowa, NJ, pp. 1-37. [*Marsilea hirsuta*].
659. Roux, J. P. 2014. *Elaphoglossum nimbaense* J.P. Roux, sp. nov. (Pteridophyta: Dryopteridaceae), a new fern species from Liberia, West Africa. Adansonia 36(1): 7-13.
660. Ruckwied, K., Goetz, A. E. & Jones, P. 2014. Palynological records of the Permian Ecca Group (South Africa): utilizing climatic icehouse-greenhouse signals for cross basin correlations. Palaeogeography Palaeoclimatology Palaeoecology 413: 167-172. [fossils, Karoo, spores].
661. Ruenk, K., Pihkva, K. & Zobel, K. 2014. Desirable site conditions for introduction sites for a locally rare and threatened fern species *Asplenium septentrionale* (L.) Hoffm. Journal for Nature Conservation 22(3): 272-278. [conservation, ecological niche, habitat].
662. Ruhfel, B. R., Gitzendanner, M. A., Soltis, P. S., Soltis, D. E. & Burleigh, J. G. 2014. From algae to angiosperms-inferring the phylogeny of green plants (Viridiplantae) from 360 plastid genomes. BMC Evolutionary Biology 14: 23.

663. Rumsey, F. J. 2014. Some name changes in the Pteridaceae of Macaronesia and Europe - with validation of hybrid names in the genus Allosorus Bernh. Fern Gazette 19: 275-279.
664. Rumsey, F. J., Robba, L., Schneider, H. & Carine, M. A. 2014. Taxonomic uncertainty and a continental conundrum: *Polypodium macaronesicum* reassessed. Botanical Journal of the Linnean Society 174: 449-460. [Macaronesia, Spain].
665. Rumsey, F. J., Schaefer, H. & Carine, M. 2014. *Asplenium auritum* Sw. sensu lato (Aspleniaceae: Pteridophyta) - an overlooked neotropical fern native to the Azores. Fern Gazette 19: 259-271.
666. Rumsey, F. 2014. Underneath the arches - an urban fern odyssey. Pteridologist 6(1): 31-32.
667. Ruyters, G., Spiero, F., Legue, V. & Palme, K. 2014. Plant biology in space. Plant Biology 16: 1-3.
668. Sabanadzovic, S., Lawrence, A., Hill, J. & Aboughanem-Sabanadzovic, N. 2014. Association of a putative mycovirus with resurrection fern in Mississippi. Joint Meeting of the American Phytopathological Society and Canadian Phytopathological Society, Minneapolis, MN, p. 101. [*Pleopeltis polypodioides*].
669. Sabatini, F. M., Burton, J. I., Scheller, R. M., Amatangelo, K. L. & Mladenoff, D. J. 2014. Functional diversity of ground-layer plant communities in old-growth and managed northern hardwood forests. Applied Vegetation Science 17(3): 398-407. [Wisconsin].
670. Sabatini, F. M., Jimenez-Alfaro, B., Burrascano, S. & Blasi, C. 2014. Drivers of herb-layer species diversity in two unmanaged temperate forests in northern Spain. Community Ecology 15(2): 147-157. [*Polystichum setiferum*, Spain].
671. Sadeghi, R., Zarkami, R. & Van Damme, P. 2014. Modelling habitat preference of an alien aquatic fern, *Azolla filiculoides* (Lam.), in Anzali wetland (Iran) using data-driven methods. Ecological Modelling 284: 1-9.
672. Saha, J., Chatterjee, C., Sengupta, A., Gupta, K. & Gupta, B. 2014. Genome-wide analysis and evolutionary study of sucrose non-fermenting 1-related protein kinase 2 (SnRK2) gene family members in *Arabidopsis* and *Oryza*. Computational Biology and Chemistry 49: 59-70. [*Selaginella*].
673. Saha, J., Gupta, K. & Gupta, B. 2014. A new insight into the phylogeny of vascular cryptogams with special reference to *Selaginella* and *Isoetes* inferred from nuclear ITS/5.8S rDNA sequences. Journal of Plant Biochemistry and Biotechnology 23(2): 167-174. [*Ceratopteris, Isoetes durieui, Isoetes subinermis, Psilotum*].
674. Saha, P., Saha, B. K. & Hazra, S. 2014. Recent changes in coastal configuration of Henry's Island. Current Science 107(4): 679-688. [*Pteris*].
675. Sakata, Y., Komatsu, K. & Takezawa, D. 2014. ABA as a universal plant hormone. In: Luttge, U., Beyschlag, W. & Cushman, J. (eds.). Progress in Botany Vol. 75. Springer-Verlag: Berlin, pp. 57-96. [abscisic acid].
676. Saldana, A., Parra, M. J., Flores-Bavestrello, A., Corcuera, L. J. & Bravo, L. A. 2014. Effects of forest successional status on microenvironmental conditions, diversity, and distribution of filmy fern species in a temperate rainforest. Plant Species Biology 29(3): 253-262. [Chile, chlorophyll fluorescence, desiccation tolerance, disturbance, Hymenophyllaceae].
677. Salgado, A. E. & Fraser-Jenkins, C. R. 2014. Proposal to reject the name *Trichomanes adiantoides* (Aspleniaceae). Taxon 63(4): 939-940.
678. Salino, A., Marques De Souza, M. G. & Arruda, A. J. 2014. *Thelypteris indusiata* (Thelypteridaceae), a new fern species from Amazonian Brazil. Phytotaxa 156(5): 279-284.
679. Salvamani, S., Gunasekaran, B., Shaharuddin, N. A., Ahmad, S. A. & Shukor, M. Y. 2014. Antiartherosclerotic effects of plant flavonoids. Biomed Research International: ID480258. [*Equisetum*, medicinal plants].
680. Samame, R. A. & Rychnovsky, S. D. 2014. Progress towards the total synthesis of the *Lycopodium* alkaloid (+)-fastigiatine. 248th National Meeting of the American Chemical Society (ACS), San Francisco, CA, p. 425.

681. Sanchez-Baracaldo, P. & Thomas, G. H. 2014. Adaptation and convergent evolution within the *Jamesonia-Eriosorus* complex in high-elevation biodiverse Andean hotspots. PLoS One 9(10): e110618.
682. Sanchez-Galvan, G. & Ramirez-Nunez, P. A. 2014. Cationic dye biosorption by *Salvinia minima*: equilibrium and kinetics. Water Air and Soil Pollution 225(7): 2008.
683. Sanger, J. C. & Kirkpatrick, J. B. 2014. Epiphyte assemblages respond to host life-form independently of variation in microclimate in lower montane cloud forest in Panama. Journal of Tropical Ecology 30: 625-628. [host trees, tree ferns].
684. Sanin, D. & Torrez, V. 2014. *Serpocaulon* x *manizalense*: a new hybrid between simple- and pinnate-leaved species of *Serpocaulon* (Polypodiaceae) from Colombia. Blumea 59(2): 123-130.
685. Sanin, D. 2014. *Serpocaulon obscurinervium* (Polypodiaceae), a new fern species from Colombia and Ecuador. Plant Ecology and Evolution 147(1): 127-133.
686. Santiago, L. S. & Dawson, T. E. 2014. Light use efficiency of California redwood forest understory plants along a moisture gradient. Oecologia 174(2): 351-363. [photobiology, *Polystichum munitum*].
687. Sanz-Azkue, I., Olariaga, I. & Felipe, A. 2014. *Vandenboschia speciosa* (Willd.) G. Kunkel in Jaizkibel: new populations with a high representation of their gametophytic phase and distribution model. In: Arizaga, J. (ed.). Revision of the natural heritage of the mountain of Jaizkibel (Gipuzkoa, Basque country). Munibe Monographs, Nature Series Vol. 2. Aranzadi Society of Sciences: Donostia, San Sebastian, pp. 111-117. [conservation, Spain, *Vandenboschia speciosa*; Spanish].
688. Sarangi, S. K., Maji, B., Singh, S., Sharma, D. K., Burman, D., Mandal, S., Ismail, A. M. & Haefele, S. M. 2014. Crop establishment and nutrient management for dry season (Boro) Rice in coastal areas. Agronomy Journal 106(6): 2013-2023. [*Azolla*].
689. Sareen, B., Bhattacharya, A., Sharma, M., Sood, A. & Ahuja, P. S. 2014. A simple technique for tracking individual spore and gametophyte development in *Adiantum lunulatum* Burm. f. using modified extra thin alginate film technique. Indian Journal of Experimental Biology 52(8): 820-824.
690. Sarkar, S., Saxena, R. K. & Sarkar, S. 2014. Palynology of the Eocene sediments of the West Garo Hills, Meghalaya, NE India: biostratigraphic and palaeoenvironmental implications. Journal of the Palaeontological Society of India 59(2): 199-212.
691. Scala, C., Ortiz, K., Catinaud, J. & Lemberger, K. 2014. Hematuria and urinary bladder lesions compatible with bracken fern (*Pteridium aquilinum*) intoxication in captive fallow deer (Dama dama). Journal of Zoo and Wildlife Medicine 45(2): 380-385.
692. Schachat, S. R., Labandeira, C. C., Gordon, J., Chaney, D., Levi, S., Halthore, M. N. & Alvarez, J. 2014. Plant-insect interactions from early Permian (Kungurian) Colwell Creek Pond, north-central Texas: the early spread of herbivory in riparian environments. International Journal of Plant Sciences 175(8): 855-890. [fossils, *Taeniopteris*].
693. Schuettpelz, E., Davila, A., Prado, J., Hirai, R. Y. & Yatskievych, G. 2014. Molecular phylogenetic and morphological affinities of *Adiantum senae* (Pteridaceae). Taxon 63(2): 258-264. [Brazil].
694. Schwartsburd, P. B. & Prado, J. 2014. Subspecies of *Hypolepis rugosula* (Dennstaedtiaceae; Pteridophyta) around the world: morphological and biogeographic perspectives. Acta Botanica Brasilica 28(2): 206-226.
695. Schwartsburd, P. B. 2014. The identity of *Polypodium gyroflexum* (= *Pleopeltis gyroflexa*, comb. nov. - Polypodiaceae). American Fern Journal 104(1): 16-21. [Amazonia, Brazil, Caatinga].
696. Schwartsburd, P. B., De Moraes, P. L. R. & Lopes-Mattos, K. L. B. 2014. Recognition of two morpho-types in eastern South American brackens (*Pteridium*-Dennstaedtiaceae-Polypodiopsida). Phytotaxa 170(2): 103-117. [*Pteridium arachnoideum*].

697. Schweitzer, D., Garris, J. R., McBride, A. E. & Smith, J. A. M. 2014. The current status of forest Macrolepidoptera in northern New Jersey: evidence for the decline of understory specialists. Journal of Insect Conservation 18(4): 561-571. [herbivory].
698. Sedlacek, O., Mikes, M., Albrecht, T., Reif, J. & Horak, D. 2014. Evidence for an edge effect on avian nest predation in fragmented afromontane forests in the Bamenda-Banso Highlands, NW Cameroon. Tropical Conservation Science 7(4): 720-732. [birds, *Pteridium aquilinum*].
699. Selim, K. A., El-Beih, A. A., Abdel-Rahman, T. M. & El-Diwany, A. I. 2014. Biological evaluation of endophytic fungus, *Chaetomium globosum* JN711454, as potential candidate for improving drug discovery. Cell Biochemistry and Biophysics 68(1): 67-82. [*Adiantum capillus-veneris*].
700. Selmants, P. C., Litton, C. M., Giardina, C. P. & Asner, G. P. 2014. Ecosystem carbon storage does not vary with mean annual temperature in Hawaiian tropical montane wet forests. Global Change Biology 20(9): 2927-2937. [*Cibotium*].
701. Sen, K. & Mukhopadhyay, R. 2014. New report of vessel elements in *Aleuritopteris* and *Cheilanthes*. Taiwania 59(3): 231-239. [anatomy, conduits, water transport].
702. Sender, L. M., Villanueva-Amadoz, U., Diez, J. B., Fernandez-Baldor, F. T. & Ferrer, J. 2014. Earliest record of semi-aquatic fern leaves (Family Marsileaceae) in the Mesozoic of Eurasia (Lower Cretaceous, Spain). Cretaceous Research 51: 241-247. [fossils, *Regnellites nagashimae*].
703. Sener, M., Reddy, D. H. K. & Kayan, B. 2014. Biosorption properties of pretreated sporopollenin biomass for lead(II) and copper(II): Application of response surface methodology. Ecological Engineering 68: 200-208. [*Lycopodium clavatum*, spores].
704. Senterre, B., Rouhan, G., Fabre, I., Morel, C. & Christenhusz, M. J. M. 2014. Revision of the fern family Marattiaceae in the Seychelles with two new species and a discussion of the African *Ptisana fraxinea* complex. Phytotaxa 158(1): 57-75. [*Angiopteris chongsengiana, Angiopteris madagascariensis, Ptisana fraxinea, Ptisana laboudalloniana*].
705. Seo, H. S., Lee, H. J. & Lee, C. J. 2014. Pyunkang-hwan (Pyunkang-tang) regulates hypersecretion of pulmonary mucin from rats with sulfur dioxide-induced bronchitis and production and gene expression of MUC5AC mucin from human airway epithelial cells. Natural Product Sciences 20(3): 196-201. [medicinal plants, *Selaginella tamariscina*].
706. Sessa, E. B. & Givnish, T. J. 2014. Leaf form and photosynthetic physiology of *Dryopteris* species distributed along light gradients in eastern North America. Functional Ecology 28: 108-123.
707. Sessa, E. B., Banks, J. A., Barker, M. S., Der, J. P., Duffy, A. M., Graham, S. W., Hasebe, M., Langdale, J. A., Li, F. W., Marchant, D. B., Pryer, K. M., Rothfels, C. J., Roux, S. J., Salmi, M. L., Sigel, E. M., Soltis, D. E., Stevenson, D. W. & Wolf, P. G. 2014. Between two fern genomes. GigaScience 3: 15. [*Azolla*, *Ceratopteris*, genomics].
708. Shaffer-Fehre, M. 2014. *Nothoperanema* (Dryopteridaceae): recognition of a novel diagnostic feature. Kew Bulletin 69(4): 9540.
709. Shaheen, H., Qureshi, R., Akram, A., Gulfraz, M. & Potter, D. 2014. A preliminary floristic checklist of Thal desert Punjab, Pakistan. Pakistan Journal of Botany 46(1): 13-18.
710. Shalimov, A. P. & Gureyeva, I. I. 2014. The type specimen of *Polypodium mairei* Brause (Polypodiaceae) in the P.N. Krylov Herbarium (TK). Systematic notes on the materials of P.N. Krylov Herbarium of Tomsk State University 109: 55-59. [Russia; Russian, English summary].
711. Sharma, A. 2014. Cytology of three *Asplenium* species from Uttarakhand. Indian Fern Journal 31(1-2): 136-138. [chromosomes, polyploidy].
712. Sharma, A. 2014. Ferns of the Aabshar forest area (Kandaghat, Dist. Solan), Himachal Pradesh, West Himalaya. Indian Fern Journal 31(1-2): 143-151.
713. Sharma, A., Slathia, S., Choudhary, S. P., Sharma, Y. P. & Langer, A. 2014. Role of 24-Epibrassinolide, putrescine and spermine in salinity stressed *Adiantum capillus-veneris* leaves.

Proceedings of the Indian National Science Academy Part B Biological Sciences 84(1): 183-192.

714. Sharma, B. D., Bohra, D. R., Suthar, O. P. & Harsh, R. 2014. Reporting *in situ* apogamous abortive embryos within megaspores of some species of *Isoetes* from Rajasthan. Indian Fern Journal 31(1-2): 10-16.
715. Sharma, B. D., Bohra, D. R., Suthar, O. P., Harsh, R. & Purohit, S. N. 2014. Abortive embryonic structures within megaspores of *Isoetes*. L (Lycopsida – Pteridophyta). Geophytology 44(1): 87-90.
716. Sharpe, J. M. & Shiels, A. B. 2014. Understory fern community structure, growth and spore production responses to a large-scale hurricane experiment in a Puerto Rico rainforest. Forest Ecology and Management 332: 75-86. [*Cyathea borinquena*, disturbance, *Nephrolepis brownii*, *Thelypteris deltoidea*].
717. Sheded, M. G., Hamed, S. T. & Badry, M. O. 2014. Vegetation analysis of six riverian islands in hyper-arid environments at Qena Governorate (Upper Egypt). Acta Botanica Hungarica 56(42097): 409-431.
718. Shen, H., He, Z., Yan, H., Xing, Z., Chen, Y., Xu, W., Xu, W. & Ma, M. 2014. The fronds tonoplast quantitative proteomic analysis in arsenic hyperaccumulator *Pteris vittata* L. Journal of Proteomics 105: 46-57.
719. Shen, Z., Sun, Q. & Liu, M. 2014. Soil carbon and nitrogen dynamics induced by tissue-litter decomposition of copper mine tailings from the gramineae and cryptogram communities, China. Analytical Letters 47(5): 885-899. [*Hippochaete ramosissimum*, isotopes].
720. Sheng, J. & Sun, Y. 2014. Antioxidant properties of different molecular weight polysaccharides from *Athyrium multidentatum* (Doll.) Ching. Carbohydrate Polymers 108: 41-45. [medicinal plants].
721. Sher, Z., Hussain, F. & Badshah, L. 2014. Biodiversity and ecological characterization of the Flora of Gadoon Rangeland, District Swabi, Khyber Pukhtunkhwa, Pakistan. Iranian Journal of Botany 20(1): 96-108.
722. Sherwood, A. R., Conklin, K. Y. & Liddy, Z. J. 2014. What's in the air? Preliminary analyses of Hawaiian airborne algae and land plant spores reveal a diverse and abundant flora. Phycologia 53(6): 579-582. [aerobiology, spore dispersal].
723. Shi, X. L., Li, C. W., Wan, Q. Z., Li, A. Q., Wang, H. & Liu, K. 2014. *Drynaria* total flavonoids decrease cathepsin K expression in ovariectomized rats. Genetics and Molecular Research 13(2): 4311-4319. [medicinal plants].
724. Shiels, A. B., Gonzalez, G. & Willig, M. R. 2014. Responses to canopy loss and debris deposition in a tropical forest ecosystem: synthesis from an experimental manipulation simulating effects of hurricane disturbance. Forest Ecology and Management 332: 124-133.
725. Shil, S., Choudhury, M. D. & Das, S. 2014. Indigenous knowledge of medicinal plants used by the Reang tribe of Tripura state of India. Journal of Ethnopharmacology 152(1): 135-141. [*Cyathea*, medicinal plants, tree ferns].
726. Shimane, M., Ueno, Y., Morisaki, K., Oogami, S., Natsume, M., Hayashi, K. I., Nozaki, H. & Kawaide, H. 2014. Molecular evolution of the substrate specificity of ent-kaurene synthases to adapt to gibberellin biosynthesis in land plants. Biochemical Journal 462: 539-546. [*Selaginella moellendorffii*].
727. Shiraya, T., Kaneko, K. & Mitsui, T. 2014. Quantitative proteomic analysis of intact plastids. In: Jorrin-Novo, J. V., Komatsu, S., Weckwerth, W. & Wienkoop, S. (eds.). Plant proteomics: methods and protocols, 2nd ed. Humana Press: Totowa, NJ, pp. 469-480. [new methods, *Osmunda*].
728. Shrestha, N. & Zhang, X. C. 2014. Is *Huperzia hamiltonii* (Spreng.) Trevis. a Himalayan endemic? An empirical evaluation using species distribution modeling. Indian Fern Journal 31(1-2): 154-161.

729. Shrestha, N., Xing, F. W., Qi, X. P., Yan, Y. H. & Zhang, X. C. 2014. *Huperzia nanlingensis* (Lycopodiaceae), a new terrestrial firmoss from southern China. Phytotaxa 173(1): 73-79.
730. Shu, S., Zhao, X., Wang, W., Zhang, G., Cosoveanu, A., Ahn, Y. & Wang, M. 2014. Identification of a novel endophytic fungus from *Huperzia serrata* which produces huperzine A. World Journal of Microbiology & Biotechnology 30(12): 3101-3109.
731. Sigel, E. M., Johnson, A. K. & Haufler, C. H. 2014. A first record of *Polypodium saximontanum* for the Flora of Montana. American Fern Journal 104(1): 22-23.
732. Sigel, E. M., Windham, M. D. & Pryer, K. M. 2014. Evidence for reciprocal origins in *Polypodium hesperium* (Polypodiaceae): a fern model system for investigating how multiple origins shape allopolyploid genomes. American Journal of Botany 101(9): 1476-1485. [fossils, hybrids, Pleistocene, polyploidy].
733. Sigel, E. M., Windham, M. D., Haufler, C. H. & Pryer, K. M. 2014. Phylogeny, divergence time estimates, and phylogeography of the diploid species of the *Polypodium vulgare* complex (Polypodiaceae). Systematic Botany 39(4): 1042-1055. [evolution].
734. Sigel, E. M., Windham, M. D., Smith, A. R., Dyer, R. J. & Pryer, K. M. 2014. Rediscovery of *Polypodium calirhiza* (Polypodiaceae) in Mexico. Brittonia 66(3): 278-286. [Oaxaca].
735. Silva Matos, D. M., Xavier, R. O., Tiberio, F. C. S. & Marrs, R. H. 2014. A comparative study of resource allocation in *Pteridium* in different Brazilian ecosystems and its relationship with European studies. Brazilian Journal of Biology 74(1): 156-165. [invasive species, *Pteridium aquilinum, Pteridium esculentum*].
736. Simmons, M. P. & Barrie, F. R. 2014. *Haydenoxylon*, a replacement name for *Haydenia* (Celastraceae). Novon 23(2): 224-225. [Cyatheaceae, homonyms].
737. Simpson, A., Turner, I., Brantley, E. & Helms, B. 2014. Bank erosion hazard index as an indicator of near-bank aquatic habitat and community structure in a southeastern Piedmont stream. Ecological Indicators 43: 19-28. [riparian vegetation, *Woodwardia*].
738. Sineshchekov, V., Koppel, L., Okamoto, H. & Wada, M. 2014. Fern *Adiantum capillus-veneris* phytochrome 1 comprises two native photochemical types similar to seed plant phytochrome A. Journal of Photochemistry and Photobiology B Biology 130: 20-29.
739. Singh, H., Husain, T., Agnihotri, P., Pande, P. C. & Khatoon, S. 2014. An ethnobotanical study of medicinal plants used in sacred groves of Kumaon Himalaya, Uttarakhand, India. Journal of Ethnopharmacology 154(1): 98-108.
740. Singh, J., Kumar, M. & Vyas, A. 2014. Healthy response from chromium survived pteridophytic plant-*Ampelopteris prolifera* with the interaction of mycorrhizal fungus-*Glomus deserticola*. International Journal of Phytoremediation 16(5): 524-535.
741. Singh, S. K., Rajkumar, S. D., Srivastava, S. K. & Gautam, R. P. 2014. Discovery of diploid cytotype of *Helminthostachys zeylanica* (L.) Hook. (Helminthostachyaceae - Pteridophyta). Indian Fern Journal 31(1-2): 124-131.
742. Singh, S. K., Yadav, B. B., Srivastava, M., Shukla, P. K. & Srivastava, G. K. 2014. Comparative morphological studies on spikes of Indian *Selaginella* Beauv. Plant Systematics and Evolution 300(5): 1235-1245.
743. Singh, S. K., Yadav, B. B., Srivastava, M., Shukla, P. K. & Srivastava, G. K. 2014. Micro-morphology of *Selaginella* megaspores from India. Grana 53(3): 197-220.
744. Sini, S., Smitha, R. B. & Madhusoodanan, P. V. 2014. Induction of sporocarp development in the mosquito fern *Azolla rubra* R. Br. Annals of Plant Sciences 4(2): 994-1002.
745. Sipaoba-Tavares, L. H. & Dias, S. G. 2014. Water quality and communities associated with macrophytes in a shallow water-supply reservoir on an aquaculture farm. Brazilian Journal of Biology 74(2): 420-428. [*Salvinia auriculata*].
746. Six, L. J., Bakker, J. D. & Bilby, R. E. 2014. Vegetation dynamics in a novel ecosystem: agroforestry effects on grassland vegetation in Uruguay. Ecosphere 5(6): 74.

747. Sizemore, N. & Rychnovsky, S. D. 2014. Studies toward the synthesis of palhinine *Lycopodium* alkaloids: a Morita-Baylis-Hillman/intramolecular Diels-Alder approach. Organic Letters 16(3): 688-691. [medicinal plants, *Palhinhaea cernua*].

748. Slavich, E., Warton, D. I., Ashcroft, M. B., Gollan, J. R. & Ramp, D. 2014. Topoclimate versus macroclimate: how does climate mapping methodology affect species distribution models and climate change projections? Diversity and Distributions 20(8): 952-963. [Australia, biodiversity, biogeography, New South Wales].

749. Sleep, A. 2014. Hybridization in *Polystichum* (Dryopteridaceae: Pteridophyta). Fern Gazette 19: 319-341.

750. Smeriglio, A., Tomaino, A. & Trombetta, D. 2014. Herbal products in pregnancy: experimental studies and clinical reports. Phytotherapy Research 28(8): 1107-1116. [*Equisetum arvense*, medicinal plants].

751. Smetzer, J. R., King, D. I. & Schlossberg, S. 2014. Management regime influences shrubland birds and habitat conditions in the northern Appalachians, USA. Journal of Wildlife Management 78(2): 314-324.

752. Smith, A. R. & Tejero-Diez, J. D. 2014. *Pleopeltis* (Polypodiaceae), a redefinition of the genus and nomenclatural novelties. Botanical Sciences 92(1): 43-58. [new combinations, nomenclature, *Pleopeltis*, taxonomy].

753. Smith, M. C., Lake, E. C., Pratt, P. D., Boughton, A. J. & Pemberton, R. W. 2014. Current status of the biological control agent *Neomusotima conspurcatalis* (Lepidoptera: Crambidae) on *Lygodium microphyllum* (Polypodiales: Lygodiaceae) in Florida. Florida Entomologist 97(2): 817-820. [plant-insect interactions].

754. Smith, S. & Medeiros, K. 2014. Manipulation of water levels to facilitate vegetation change in a coastal lagoon undergoing partial tidal restoration (Cape Cod, Massachusetts) (vol 29, pg 93, 2013). Journal of Coastal Research 30(1): 214. [*Thelypteris palustris*, wetlands].

755. Song, W., Qin, Y., Zhu, Y., Yin, G., Wu, N., Li, Y. & Hu, Y. 2014. Delineation of plant caleosin residues critical for functional divergence, positive selection and coevolution. BMC Evolutionary Biology 14: 124. [*Selaginella moellendorffii*].

756. Song, Y., Zhang, J. & Zhang, H. 2014. Analysis of cpDNA trnL-trnF sequences of *Huperzia serrata* var. *longipetiolata* of different geographical populations. Chinese Journal of Applied and Environmental Biology 20(3): 443-448. [Chinese].

757. Soti, P. G., Jayachandran, K., Purcell, M., Volin, J. C. & Kitajima, K. 2014. Mycorrhizal symbiosis and *Lygodium microphyllum* invasion in South Florida - a biogeographic comparison. Symbiosis 62(2): 81-90.

758. Sow, E. H., Fofana, C. A. K. & Aw, C. 2014. Diatoms of Dindifelou fall (upper Basin of the Gambia River, Senegal): floristic inventory. African Journal of Ecology 52(3): 352-362. [epiphyton].

759. Spieles, D. J. 2014. Early successional vegetation assembly in a spatially variable hydrologic regime. Journal of Freshwater Ecology 29(1): 141-152. [*Marsilea quadrifolia*].

760. Sreenivas, V. K. & Madhusoodanan, P. V. 2014. *Pteris geminata* Wall. ex J. Agardh (Pteridaceae): a critically endangered pteridophyte in India. Journal of Threatened Taxa 6(6): 5875-5877.

761. Srivastava, R. & Uniyal, P. L. 2014. *In vitro* developmental studies of *Cheilanthes farinosa* (Forssk.) Kaulf. (Pteridaceae). Telopea 17: 87-91. [tissue culture].

762. Srivastava, R., Uniyal, P. L. & Kholia, B. S. 2014. Studies on reproductive biology of *Microsorum alternifolium* Copel. The International Journal of Plant Reproductive Biology 6(1): 15-19.

763. Stalter, R. & Lamont, E. E. 2014. Vascular flora of Brookhaven National Laboratory, Long Island, New York. Northeastern Naturalist 21(2): 285-302. [*Equisetum arvense*, *Lycopodium obscurum*].

764. Stromstedt, A. A., Felth, J. & Bohlin, L. 2014. Bioassays in natural product research - strategies and methods in the search for anti-inflammatory and antimicrobial activity. Phytochemical Analysis 25(1): 13-28. [*Polypodium decumanum*].

765. Strullu-Derrien, C., Kenrick, P., Pressel, S., Duckett, J. G., Rioult, J. P. & Strullu, D. G. 2014. Fungal associations in *Horneophyton ligneri* from the Rhynie Chert (c. 407 million year old) closely resemble those in extant lower land plants: novel insights into ancestral plant-fungus symbioses. New Phytologist 203(3): 964-979. [Devonian, endophytes, fossils, Scotland].

766. Strullu-Derrien, C., Kenrick, P., Tafforeau, P., Cochard, H., Bonnemain, J. L., Le Herisse, A., Lardeux, H. & Badel, E. 2014. The earliest wood and its hydraulic properties documented in c. 407-million-year-old fossils using synchrotron microtomography. Botanical Journal of the Linnean Society 175(3): 423-437. [anatomy, *Armoricaphyton*, Devonian, fossils, France, xylem].

767. Su, J., Chen, Y. J. & Chang, Y. C. 2014. A study of a pilot-scale biogas bio-filter system for utilization on pig farms. Journal of Agricultural Science 152(2): 217-224. [industrial ferns, *Sphaeropteris lepifera*, Taiwan, tree ferns].

768. Su, X. M., Jiang, L. Y. & Qiao, G. X. 2014. The fern-feeder aphids (Hemiptera: Aphididae) from China: a generic account, descriptions of one new genus, one new species, one new subspecies, and keys. Journal of Insect Science (Tucson) 14: 23. [herbivory].

769. Sugawara, K., Kobayashi, A., Endo, G., Hatayama, M. & Inoue, C. 2014. Evaluation of the effectiveness and salt stress of *Pteris vittata* in the remediation of arsenic contamination caused by tsunami sediments. Journal of Environmental Science and Health Part A Toxic-Hazardous Substances & Environmental Engineering 49(14): 1631-1638.

770. Sugiura, N. 2014. Pollination and floral ecology of *Arundina graminifolia* (Orchidaceae) at the northern border of the species' natural distribution. Journal of Plant Research 127(1): 131-139. [competition, *Dicranopteris linearis*, Japan].

771. Sui, X. & Gao, C. 2014. Huperzine A ameliorates damage induced by acute myocardial infarction in rats through antioxidant, anti-apoptotic and anti-inflammatory mechanisms. International Journal of Molecular Medicine 33(1): 227-233. [*Huperzia serrata*, medicinal plants].

772. Sun, C., Li, T., Na, Y., Wu, W., Li, Y., Wang, L. & Zhang, L. 2014. *Flabellariopteris*, a new aquatic fern leaf from the late Triassic of western Liaoning, China. Chinese Science Bulletin 59(20): 2410-2418.

773. Sun, L. L., Li, Y., Li, S. S., Wu, X. J., Hu, B. Z. & Chang, Y. 2014. Identification and characterisation of DfCHS, a chalcone synthase gene regulated by temperature and ultraviolet in *Dryopteris fragrans*. Cellular and Molecular Biology 60(6): 1-7.

774. Sun, L., Liao, X., Yan, X., Zhu, G. & Ma, D. 2014. Evaluation of heavy metal and polycyclic aromatic hydrocarbons accumulation in plants from typical industrial sites: potential candidate in phytoremediation for co-contamination. Environmental Science and Pollution Research International 21(21): 12494-12504. [*Pteris cretica*, *Pteris vittata*].

775. Sun, R., Deng, W. Q., Yuan, X. Z., Liu, H. & Zhang, Y. W. 2014. Riparian vegetation after dam construction on mountain rivers in China. Ecohydrology 7(4): 1187-1195. [*Azolla imbricata*].

776. Sundberg, S. & Aronsson, M. 2014. How is it possible for the Swedish vascular plants in the EU's art- and habitat directive? Svensk Botanisk Tidskrift 108(42097): 168-187. [conservation, *Lycopodium*, Sweden; Swedish].

777. Sundberg, S. 2014. Boreal plant decline in southern Sweden during the twentieth century. New Journal of Botany 4(2): 76-84. [biodiversity, *Diphasiastrum complanatum*, land use changes, Sweden].

778. Sunderlin, D., Trop, J. M., Idleman, B. D., Brannick, A., White, J. G. & Grande, L. 2014. Paleoenvironment and paleoecology of a late Paleocene high-latitude terrestrial succession, Arkose Ridge Formation at Box Canyon, southern Talkeetna Mountains, Alaska. Palaeogeography Palaeoclimatology Palaeoecology 401: 57-80. [fossils].

779. Sundue, M. A. & Rothfels, C. J. 2014. Stasis and convergence characterize morphological evolution in eupolypod II ferns. Annals of Botany 113(1): 35-54.
780. Sundue, M. A. 2014. *Mycopteris*, a new neotropical genus of grammitid ferns (Polypodiaceae). Brittonia 66(2): 174-185. [ascomycetes, *Ascospermum*].
781. Sundue, M. A., Parris, B. S., Ranker, T. A., Smith, A. R., Fujimoto, E. L., Zamora-Crosby, D., Morden, C. W., Morden, C. W., Chen, C. W., Rouhan, G., Hirai, R. Y. & Prado, J. 2014. Global phylogeny and biogeography of grammitid ferns (Polypodiaceae). Molecular Phylogenetics and Evolution 81: 195-206.
782. Surina, B. & Martincic, A. 2014. Ecology and niche assembly of *Campanula tommasiniana*, a narrow endemic of Mt Ucka (Liburnian karst, north-western Adriatic). Acta Botanica Croatica 73(1): 221-254.
783. Svensson, A. & Wigermo, C. 2014. Rutlasbraken in Scania 2009. Botaniska Notiser 147(3): 163-164. [*Botrychium lunaria*, *Botrychium matricariifolium*, Sweden; Swedish].
784. Swierkosz, K., Reczynska, K. & Pech, P. 2014. Is the plant species composition of Silver fir mixed forest in the Polish highlands affected by air pollution and climate warming? Phytocoenologia 44(42036): 45-53. [*Athyrium filix-femina*, bioindicators].
785. Sylvester, S. P., Sylvester, M. D. P. V. & Kessler, M. 2014. The world's highest vascular epiphytes found in the Peruvian Andes. Alpine Botany 124(2): 179-185. [Andes, biogeography, *Melpomene peruviana*, Peru, *Polypodium*].
786. Sze, H., Geisler, M. & Murphy, A. S. 2014. Linking the evolution of plant transporters to their functions. Frontiers in Plant Science 4: 547. [genetics, *Selaginella moellendorffii*].
787. Takahasi, A. & Meirelles, S. T. 2014. Ecology of herbaceous vegetation on Bancadas Lateriticas (Cangas) in Corumba, Mato Grosso do Sul State, Brazil. Hoehnea 41(4): 515-528. [*Selaginella sellowii*; Portuguese].
788. Takemoto, S., Nakamura, H. & Tabata, M. 2014. The importance of wild plant species as potential inoculum reservoirs of white root rot disease. Forest Pathology 44(1): 75-81. [ascomycetes, fungi, Japan, pathogens, *Pteridium aquilinum*, *Rosellinia*].
789. Tanaka, J., Yano, K., Aya, K., Hirano, K., Takehara, S., Koketsu, E., Ordonio, R. L., Ordonio, R. L., Nakajima, M., Ueguchi-Tanaka, M. & Matsuoka, M. 2014. Antheridiogen determines sex in ferns via a spatiotemporally split gibberellin synthesis pathway. Science 346 (6208): 469-473. [reproductive biology].
790. Tanaka, T. & Sato, T. 2014. Species richness of seed plants and ferns along a temperate elevational gradient in central Japan. Plant Ecology 215(11): 1299-1311. [biodiversity].
791. Tanaka, T., Isaka, Y., Hattori, M. & Sato, T. 2014. Ecological and phylogenetic approaches for diversification of apogamous ferns in Japan. Plant Systematics and Evolution 300(9): 2041-2050. [biogeography, evolution, reproductive biology].
792. Tegelberg, R., Mononen, T. & Saarenmaa, H. 2014. High-performance digitization of natural history collections: automated imaging lines for herbarium and insect specimens. Taxon 63(6): 1307-1313.
793. Tessier, J. T. 2014. Reduced winter snowfall damages the structure and function of wintergreen ferns. American Journal of Botany 101(6): 965-969. [*Dennstaedtia*, *Dryopteris*, *Polystichum*].
794. Testo, W. & Sundue, M. 2014. Primary hemiepiphytism in *Colysis ampla* (Polypodiaceae) provides new insight into the evolution of growth habit in ferns. International Journal of Plant Sciences 175(5): 526-536. [*Lecanopteris*].
795. Testo, W. L., Grasso, M. S. & Barrington, D. S. 2014. Beyond antheridiogens: chemical competition between gametophytes of *Polypodium appalachianum* and *Polypodium virginianum*. Journal of the Torrey Botanical Society 141(4): 302-312.
796. Thiemann, R. 2014. Artificial hybrids of *Asplenium*. Pteridologist 6(1): 42-45.
797. Thomaes, A., De Keersmaeker, L., Verschelde, P., Vandekerkhove, K. & Verheyen, K. 2014. Tree species determine the colonisation success of forest herbs in post-agricultural forests:

results from a 9 yr introduction experiment. Biological Conservation 169: 238-247. [Belgium, *Pteridium aquilinum*, reintroduction, restoration, understory].

798. Thomas, B. A. 2014. *In situ* stems: preservation states and growth habits of the Pennsylvanian (Carboniferous) Calamitaleans based upon new studies of Calamites Sternberg, 1820 in the Duckmantian at Brymbo, North Wales, UK. Palaeontology 57(1): 21-36.
799. Thorroad, S., Worawittayanont, P., Khunnawutmanotham, N., Chimnoi, N., Jumruksa, A., Ruchirawat, S. & Thasana, N. 2014. Three new *Lycopodium* alkaloids from *Huperzia carinata* and *Huperzia squarrosa*. Tetrahedron 70(43): 8017-8022.
800. Thrippleton, T., Dolos, K., Perry, G. L. W., Groeneveld, J. & Reineking, B. 2014. Simulating long-term vegetation dynamics using a forest landscape model: the post-Taupo succession on Mt Hauhungatahi, North Island, New Zealand. New Zealand Journal of Ecology 38(1): 26. [*Cyathea smithii*, tree ferns].
801. Tian, N., Wang, Y. D., Philippe, M., Zhang, W., Jiang, Z. K. & Li, L. Q. 2014. A specialized new species of *Ashicaulis* (Osmundaceae, Filicales) from the Jurassic of Liaoning, NE China. Journal of Plant Research 127(2): 209-219. [fossils, Jurassic].
802. Timm, N. 2014. Cave ferns of Madeira. Pteridologist 6(1): 33.
803. Timm, N. 2014. *Davallia* as traditional decorations. Pteridologist 6(1): 20-21.
804. Tisarum, R., Lessl, J. T., Dong, X., de Oliveira, L. M., Rathinasabapathi, B. & Ma, L. Q. 2014. Antimony uptake, efflux and speciation in arsenic hyperaccumulator *Pteris vittata*. Environmental Pollution 186: 110-114. [phytoremediation].
805. Tomei, E. J. & Wolniak, S. M. 2014. Kinesin-2 and kinesin-9 are required for ciliogenesis during rapid development. Joint Annual Meeting of the American-Society-for-Cell-Biology (ASCB) / International Federation for Cell Biology (IFCB), Philadelphia, PA, p. 153. [*Marsilea vestita*].
806. Tomescu, A. M. F., Wyatt, S. W., Hasebe, M. & Rothwell, G. W. 2014. Early evolution of the vascular plant body plan – the missing mechanisms. Current Opinion in Plant Biology 17: 126-136.
807. Tomsik, P. 2014. Ferns and lycopods - a potential treasury of anticancer agents but also a carcinogenic hazard. Phytotherapy Research 28(6): 798-810. [medicinal plants, *Pteridium*, toxic plants].
808. Tonkov, S. & Possnert, G. 2014. 25. Mire Gyola, Belasitsa Mountain (south-western Bulgaria). Grana 53(4): 312-314. [*Dryopteris filix-mas, Pteridium aquilinum*].
809. Toome, M., Ohm, R. A., Riley, R. W., James, T. Y., Lazarus, K. L., Henrissat, B., Albu, S., Albu, S., Chow, J., Clum, A., Heller, G., Lipzen, A., Nolan, M., Sandor, L., Zvenigorodsky, N., Grigoriev, I. V., Spatafora, J. W. & Aime, M. C. 2014. Genome sequencing provides insight into the reproductive biology, nutritional mode and ploidy of the fern pathogen *Mixia osmundae*. New Phytologist 202(2): 554-564. [basidiomycetes, fungi, *Osmunda*].
810. Torreias, S. R. S., Ferreira-Keppler, R. L. & Ronderos, M. M. 2014. Biting midges (Ceratopogonidae: Diptera) present in aquatic macrophytes from wetlands of Marchantaria Island, Iranduba, Central Amazonia, Brazil. Journal of Natural History 48(42036): 109-122. [fern-animal interactions, *Salvinia auriculata*].
811. Torres, G. R., Perez, C. F., Lupo, L. C. & Martinez, O. G. 2014. Preliminary record of annual atmospheric deposit of fern spores from the Yungas over an environmental gradient in the middle basin of Rio Perico (Jujuy, Argentina). Boletin de la Sociedad Argentina de Botanica 49(4): 503-512. [Spanish].
812. Troia, A. & Greuter, W. 2014. A critical conspectus of Italian *Isoetes* (Isoetaceae). Plant Biosystems 148(1): 13-20.
813. Troia, A., Raimondo, F. M. & Campisi, P. 2014. The *Isoetes longissima* complex (Isoetaceae) in Italy: observations on the morphology of spores and leaves, and taxonomic implications. Phytotaxa 174(3): 149-156. [*Isoetes dubia, Isoetes longissima, Isoetes tiguliana, Isoetes velata*].

814. Tuomisto, H., Zuquim, G. & Cardenas, G. 2014. Species richness and diversity along edaphic and climatic gradients in Amazonia. Ecography 37: 1034-1046.
815. Tyagi, K., Ghosh, B. & Kumar, V. 2014. The genus *Ctenothrips* from India (Thysanoptera: Thripidae) with description of one new species and one new record. Zootaxa 3821(2): 273-279. [herbivory, plant-insect interactions].
816. Urgenson, L. S., Reichard, S. H. & Halpern, C. B. 2014. Habitat factors and species' traits influence riparian community recovery following removal of Bohemian knotweed (*Polygonum* x *bohemicum*). Northwest Science 88(3): 246-260. [*Polystichum munitum*, restoration].
817. Valdespino, I. A., Lopez, C. & De Araujo Goes-Neto, L. A. 2014. Additions to Cuban *Selaginella* (Selaginellaceae). Phytotaxa 184(4): 235-244. [*Selaginella myriostachya, Selaginella nanophylla, Selaginella phiaria*].
818. Valledor, L., Menendez, V., Jesus Canal, M., Revilla, A. & Fernandez, H. 2014. Proteomic approaches to sexual development mediated by antheridiogen in the fern *Blechnum spicant* L. Proteomics 14: 2061-2071.
819. Vallejo, M., Loyola, S., Contreras, D., Ugarte, G., Cifuente, D., Ortega, G., Cabrera, J. L., Cabrera, J. L., Tonn, C., Carreno, M., Delgado, R., Morales, B. & Agnese, M. 2014. A new semisynthetic derivative of sauroine induces LTP in hippocampal slices and improves learning performance in the morris water maze. Journal of Neurochemistry 129(5): 864-876. [*Huperzia saururus*, medicinal plants].
820. Valmonte, G. R., Arthur, K., Higgins, C. M. & MacDiarmid, R. M. 2014. Calcium-dependent protein kinases in plants: evolution, expression and function. Plant and Cell Physiology 55(3): 551-569. [*Selaginella moellendorffii*].
821. van Konijnenburg-van Cittert, J. H. A., Kustatscher, E., Bauer, K., Pott, C., Schmeissner, S., Dütsch, G. & Krings, M. 2014. A *Selaginellites* from the Rhaetian of Wüstenwelsberg (Upper Franconia, Germany). Neues Jahrbuch für Geologie und Palaeontologie - Abhandlungen 272(2): 115-127. [fossils]
822. Van Zandt, M., Delparte, D., Hart, P., Duvall, F. & Penniman, J. 2014. Nesting characteristics and habitat use of the endangered Hawaiian petrel (*Pterodroma sandwichensis*) on the island of Lana'i. Waterbirds 37(1): 43-51. [birds, *Dicranopteris linearis, Diplopterygium pinnatum*].
823. Vaness, B. M., Wilson, S. D. & MacDougall, A. S. 2014. Decreased root heterogeneity and increased root length following grassland invasion. Functional Ecology 28(5): 1266-1273. [invasive species, *Selaginella densa*].
824. Vardhini, B. V. 2014. Brassinosteroids' role for amino acids, peptides and amines modulation in stressed plants - a review. In: Anjum, N. A., Gill, S. S. & Gill, R. (eds.). Plant adaptation to environmental change: significance of amino acids and their derivatives. CABI Publishing: Wallingford, Oxon, UK, pp. 300-316. [*Equisetum arvense*].
825. Varma, P. K. V. & Madhusoodanan, P. V. 2014. Molecular systematics of the filmy ferns (Hymenophyllaceae) of South India. Indian Fern Journal 31(1-2): 69-89.
826. Varma, P. K. V., Mohanan, K. V. & Madhusoodanan, P. V. 2014. Phenetics of South Indian trichomanoid ferns. Indian Fern Journal 31(1-2): 53-68.
827. Vega, J. A., Fernandez, C., Fonturbel, T., Gonzalez-Prieto, S. & Jimenez, E. 2014. Testing the effects of straw mulching and herb seeding on soil erosion after fire in a gorse shrubland. Geoderma 223: 79-87. [fire ecology, *Pteridium aquilinum*, restoration].
828. Velayos, M., Barbera, P., Cabezas, F. J., De La Estrella, M., Fero, M. & Aedo, C. 2014. Checklist of the vascular plants of Annobon (Equatorial Guinea). Phytotaxa 171(1): 1-78. [Annobon Island].
829. Velazquez-Montes, E. 2014. The family Isoetaceae in Guerrero, Mexico: a new record. Botanical Sciences 92(2): 183-188. [*Isoetes pallida*].
830. Vera, E. I. & Passalia, M. G. 2014. *Gleicheniaceaephyllum san-martini*, a new name for *Gleichenites san-martini* Halle emend. Herbst 1962. Ameghiniana 51(1): 79-80. [Cretaceous, fossils].

831. Verma, D., Singh, S. K., Kholia, B. S., Sinha, B. K. & Pandey, S. 2014. Pteridophytes of Khawnglung Wildlife Sanctuary, Mizoram, India. Indian Journal of Forestry 37(2): 219-234.
832. Vicic, D. D., Stoiljkovic, M. M., Bojat, N. C., Sabovljevic, M. S. & Stevanovic, B. M. 2014. Physiological tolerance mechanisms of serpentine tolerant plants from Serbia. Revue d Ecologie 69(42097): 185-195. [*Cheilanthes marantae*].
833. Vieira Tavares, T. M., Rohn, R., Roessler, R. & Noll, R. 2014. Petrified Marattiales pinnae from the lower Permian of North-Western Gondwana (Parnaiba Basin, Brazil). Review of Palaeobotany & Palynology 201: 12-28. [*Buritiranopteris costata*, fossils].
834. Vieira, C., Aguiar, F. C. & Ferreira, M. T. 2014. The relevance of bryophytes in the macrophyte-based reference conditions in Portuguese rivers. Hydrobiologia 737(1): 245-264. [*Athyrium filix-femina*, *Osmunda regalis*].
835. Vila-Ruiz, C. P., Melendez-Ackerman, E., Santiago-Bartolomei, R., Garcia-Montiel, D., Lastra, L., Figuerola, C. E. & Fumero-Caban, J. 2014. Plant species richness and abundance in residential yards across a tropical watershed: implications for urban sustainability. Ecology and Society 19(3): 22. [urban ecology].
836. Vincent, M. A. & Hickey, R. J. 2014. Systematics, taxonomy, and the new flora of the Bahamian archipelago. Botanical Review 80: 245-261.
837. Vogelmann, T. C. & Gorton, H. L. 2014. Leaf: light capture in the photosynthetic organ. In: Hohmann-Marriott, M. F. (ed.). Structural basis of biological energy generation. Springer-Verlag: Dordrecht, Netherlands, pp. 363-377. [*Selaginella*].
838. Von Raab-Straube, E. & Raus, T. 2014. Euro plus Med-Checklist Notulae, 3. Willdenowia 44(2): 287-299. [Europe, floristics, *Isoetes*, Mediterranean].
839. Vysochina, G. I. & Ershova, E. A. 2014. *Pteridium aquilinum* (Hypolepidaceae): composition and the possibility of using. Plant Resources 50(2): 296-307. [Russia, useful plants; Russian].
840. Wan, S., Zhang, C., Chen, Y., Zhao, J., Wang, X., Wu, J., Zhou, L., Zhou, L., Liu, Z. & Fu, S. 2014. The understory fern *Dicranopteris dichotoma* facilitates the overstory Eucalyptus trees in subtropical plantations. Ecosphere 5(5): 51. [fertilization, plant interactions].
841. Wan, X. M., Lei, M., Chen, T. B., Zhou, G. D., Yang, J., Zhou, X. Y., Zhang, X. & Xu, R. X. 2014. Phytoremediation potential of *Pteris vittata* L. under the combined contamination of As and Pb: beneficial interaction between As and Pb. Environmental Science and Pollution Research International 21(1): 325-336.
842. Wan, X. M., Lei, M., Zhou, X. Y., Yang, J., Chen, T. & Zhou, G. D. 2014. Characterization of arsenic uptake in living *Pteris vittata* L. Instrumentation Science & Technology 42(6): 667-677.
843. Wanat, N., Joussein, E., Soubrand, M. & Lenain, J. F. 2014. Arsenic (As), antimony (Sb), and lead (Pb) availability from Au-mine Technosols: a case study of transfer to natural vegetation cover in temperate climates. Environmental Geochemistry and Health 36(4): 783-795. [*Equisetum telmateia*, France, heavy metals, *Pteridium aquilinum*].
844. Wang, D. & Wang, L. 2014. Structure and function of neck cells in archegoniate. Acta Botanica Boreali Occidentalia Sinica 34(5): 1067-1074. [reproductive biology; Chinese].
845. Wang, D., Zhan, J. & Sun, Q. Y. 2014. Phosphate solubilization of *Aureobasidium pullulan* F4 and its mechanism. Chinese Journal of Applied Ecology 25(7): 2079-2084. [fungi, *Hippochaete ramosissimum*; Chinese].
846. Wang, F. G., Barratt, S., Falcon, W., Fay, M. F., Lehtonen, S., Tuomisto, H., Xing, F. W. & Christenhusz, M. J. M. 2014. On the monophyly of subfamily Tectarioideae (Polypodiaceae) and the phylogenetic placement of some associated fern genera. Phytotaxa 164(1): 1-16.
847. Wang, F., Lu, J. & Li, D. 2014. New geographical distribution of three species in *Adiantum* L. Acta Botanica Boreali Occidentalia Sinica 34(5): 1055-1060. [biogeography, China; Chinese].
848. Wang, G., Dai, X. L., Wang, Q. X. & Cao, J. G. 2014. Microstructural observations on the development of gametophytes and oogenesis in *Equisetum arvense*. Indian Fern Journal 31(1-2): 90-101.

849. Wang, J., Gu, B., Huang, J., Han, X., Lin, G., Zheng, F. & Li, Y. 2014. Terrestrial contributions to the aquatic food web in the middle Yangtze River. PLoS One 9(7): e102473. [China, *Nephrolepis auriculata*].

850. Wang, J., Liu, S., Ma, B., Chen, L., Song, F., Liu, Z. & Liu, C. M. 2014. Rapid screening and detection of XOD inhibitors from *S. tamariscina* by ultrafiltration LC-PDA-ESI-MS combined with HPCCC. Analytical and Bioanalytical Chemistry 406(28): 7379-7387. [medicinal plants, *Selaginella tamariscina*].

851. Wang, J., Wan, M. & Pfefferkorn, H. 2014. *Aphlebia hvistendahliae* sp. nov. from the early Permian Wuda Tuff Flora, Inner Mongolia. Review of Palaeobotany & Palynology 210: 69-76. [aphlebia, fossils].

852. Wang, L., Xu, Q. Q. & Jin, J. H. 2014. A reconstruction of the fossil *Salvinia* from the Eocene of Hainan Island, South China. Review of Palaeobotany & Palynology 203: 12-21. [*Salvinia hainanensis*].

853. Wang, R. L., Zheng, Z. H., Lu, J., Shao, H., Zhang, H., Su, Y. J. & Cai, Y. F. 2014. Allelopathic potential of invasive climbing fern *Lygodium microphyllum* against native plants and antibacterial activity of essential oils. Allelopathy Journal 33(1): 97-106.

854. Wang, R., Shao, W. & Liu, L. 2014. Cytotaxonomic study of *Hypodematium* (Hypodematiaceae) from China. Phytotaxa 161(2): 101-110.

855. Wang, S. J., Hilton, J., Galtier, J., He, X. Y. & Shao, L. Y. 2014. *Tiania yunnanense* gen. et sp. nov., an osmundalean stem from the upper Permian of southwestern China previously placed within Palaeosmunda. Review of Palaeobotany & Palynology 210: 37-49.

856. Wang, S. J., Hilton, J., He, X. Y., Seyfullah, L. J. & Shao, L. 2014. The anatomically preserved stem *Zhongmingella* gen. nov. from the upper Permian of China: evaluating the early evolution and phylogeny of the Osmundales. Journal of Systematic Palaeontology 12(1): 1-22.

857. Wang, W., Zhang, G., Zhang, X., Xia, Q., Cosoveanu, A., Ahn, Y., Wang, M. & Shu, S. 2014. Construction of a t-DNA insertional library of *Colletotrichum gloeosporioides* ES026 strain and cloning of relevant gene of huperzine A biosynthesis pathway. Journal of Pure and Applied Microbiology 8(5): 3729-3738. [*Huperzia serrata*, medicinal plants].

858. Wang, Z., Bao, W., Yan, X. & Lin, H. 2014. Responses of non-structural carbohydrate levels of *Polytrichastrum formosum* and the co-occurring understory fern *Parathelypteris nipponica* to different gap creations by thinning in a dense spruce plantation. Cryptogamie Bryologie 35(2): 165-172. [disturbance, forest management, plant interactions].

859. Wariss, H. M., Pirzada, S. A., Alam, K., Anjum, S. & Qureshi, R. 2014. Flora of Lal Suhanra National Park, Bahawalpur, Punjab, Pakistan. Pakistan Journal of Botany 46(4): 1331-1341.

860. Watanabe, T., Kouho, R., Katayose, T., Kitajima, N., Sakamoto, N., Yamaguchi, N., Shinano, T., Yurimoto, H. & Osaki, M. 2014. Arsenic alters uptake and distribution of sulphur in *Pteris vittata*. Plant Cell and Environment 37(1): 45-53.

861. Wee, M. S. M., Matia-Merino, L., Carnachan, S. M., Sims, I. M. & Goh, K. K. T. 2014. Structure of a shear-thickening polysaccharide extracted from the New Zealand black tree fern, *Cyathea medullaris*. International Journal of Biological Macromolecules 70: 86-91.

862. Wei, L. J., Raine, J. I. & Liu, X. H. 2014. Terrestrial palynomorphs of the Cenozoic Pagodroma Group, northern Prince Charles Mountains, East Antarctica. Antarctic Science 26(1): 69-79. [fossils, spores].

863. Wei, R. & Zhang, X. C. 2014. Rediscovery of *Cystoathyrium chinense* Ching (Cystopteridaceae): phylogenetic placement of the critically endangered fern species endemic to China. Journal of Systematics and Evolution 52(4): 450-457.

864. Wei, Z., Pan, Y., Li, L., Huang, Y., Qi, X., Luo, M., Zu, Y. & Fu, Y. 2014. Simultaneous determination of phenolic compounds in *Equisetum palustre* L. by ultra high performance liquid chromatography with tandem mass spectrometry combined with matrix solid-phase dispersion extraction. Journal of Separation Science 37(21): 3045-3051. [medicinal plants].

865. Wessel, G. M. 2014. Sperm in the reproduction flea market…. how do they move that way? Molecular Reproduction and Development 81(4): i. [reproductive biology].
866. Weststrand, S. 2014. Highlights from Mon. Svensk Botanisk Tidskrift 108(5): 278-281. [*Equisetum telmateia*, Sweden; Swedish].
867. Wilk, M., Banach, A., Pawlowska, J. & Wrzosek, M. 2014. Leaf-litter microfungal community on poor fen plant debris in Torfy Lake area (Central Poland). Acta Mycologica 49(1): 31-45. [*Pteridium aquilinum*].
868. Williams, S., Hubbard, S., Reinhard, K. J. & Chaves, S. M. 2014. Establishing tobacco origin from pollen identification: an approach to resolving the debate. Journal of Forensic Sciences 59(6): 1642-1649. [*Lycopodium clavatum*, pollen signatures, spores].
869. Willyams, D. & Daws, M. I. 2014. Mass propagation of Austral bracken fern (*Pteridium esculentum*) sporophytes from *in vitro* gametophyte cultures. South African Journal of Botany 91: 6-8. [bauxite, mining, propagation, restoration].
870. Windisch, P. G., Lorscheitter, M. L. & Nervo, M. H. 2014. *Isoetes naipiana* (Isoetaceae), a new species from southern Brazil. Willdenowia 44(3): 393-398.
871. Winter, K. & Holtum, J. A. M. 2014. Facultative crassulacean acid metabolism (CAM) plants: powerful tools for unravelling the functional elements of CAM photosynthesis. Journal of Experimental Botany 65: 3425-3441. [*Isoetes howellii*].
872. Wong, K. C., Law, M. C., Wong, M. S. & Chan, T. H. 2014. Development of a UPLC-MS/MS bioanalytical method for the pharmacokinetic study of (-)-epiafzelechin, a flavan-3-ol with osteoprotective activity, in C57BL/6J mice. Journal of Chromatography B 967: 162-167. [*Drynaria fortunei*, medicinal plants].
873. Wong, S. L., Huang, M. Y., Chen, C. W. & Weng, J. H. 2014. Light induction of nonphotochemical quenching, CO_2 fixation, and photoinhibition in woody and fern species adapted to different light regimes. Photosynthetica 52(2): 272-280. [*Archangiopteris somai, Asplenium antiquum, Diplazium donianum, Pyrrosia lingus*].
874. Woodbridge, J., Davies, H. J., Blake, W. H. & Fyfe, R. M. 2014. Recent environmental change in an upland reservoir catchment: a palaeoecological perspective. Journal of Paleolimnology 52(3): 229-244. [fossils, *Lycopodium*, spores, UK].
875. Wu, F., Herrmann, M. & Fang, X. 2014. Early Pliocene paleo-altimetry of the Zanda Basin indicated by a sporopollen record. Palaeogeography Palaeoclimatology Palaeoecology 412: 261-268. [fossils, India].
876. Wu, F., Wang, M. M., Xi, Z., Zhao, S. W. & Xing, S. 2014. Study on drought stress of six common ferns in North China. In: Zhang, Q. & Jin, X. (eds.). VI International Symposium on the Taxonomy of Cultivated Plants. International Society of Horticultural Science: Leuven, Belgium, pp. 113-124. [*Adiantum capillus-veneris, Adiantum pedatum, Athyrium multidentatum, Matteuccia struthiopteris, Polystichum tripteron, Pteridium aquilinum*].
877. Wu, N., Zhu, Y., Song, W., Li, Y., Yan, Y. & Hu, Y. 2014. Unusual tandem expansion and positive selection in subgroups of the plant GRAS transcription factor superfamily. BMC Plant Biology 14: 373. [*Selaginella moellendorffii*].
878. Wu, S. Y., Liang, Y. S. & Ke, L. S. 2014. The effect of storage temperature and package on the cut frond quality of bird's nest fern (*Asplenium nidus*). Journal of the Taiwan Society for Horticultural Science 60(3): 193-207. [Chinese].
879. Xavier, T. F., Kannan, M., Lija, L., Auxillia, A., Rose, A. K. F. & Kumar, S. S. 2014. Ethnobotanical study of Kani tribes in Thoduhills of Kerala, South India. Journal of Ethnopharmacology 152(1): 78-90. [*Pyrrosia heterophylla*].
880. Xi, Z., Liu, L., Rest, J. S. & Davis, C. C. 2014. Coalescent versus concatenation methods and the placement of *Amborella* as sister to water lilies. Systematic Biology 63(6): 919-932. [*Selaginella moellendorffii*].

881. Xia, C., Yu, D., Wang, Z. & Xie, D. 2014. Stoichiometry patterns of leaf carbon, nitrogen and phosphorous in aquatic macrophytes in eastern China. Ecological Engineering 70: 406-413. [nutrients].

882. Xiong, H., Ma, C. E., Li, L., Zeng, H. & Quo, D. L. 2014. Stomatal characteristics of ferns and angiosperms and their responses to changing light intensity at different habitats. Chinese Journal of Plant Ecology 38(8): 868-877. [Chinese].

883. Xu, D. J., Wang, P. P., He, Y. J., Guo, N. B., Zhang, R. B., Wu, C. B., Mu, J. & Li, C. Q. 2014. Niche characteristics of dominant plant populations of *Alsophila spinulosa* community of Danxia landform in north Guizhou. Bulletin of Botanical Research 34(5): 612-618. [Chinese].

884. Xu, D. L., Cao, J. G., Wang, Q. X. & Dai, X. L. 2014. Cloning and characterization of DEAD-box RNA helicases gene from the fern *Equisetum arvense*. Plant Diversity and Resources 36(6): 715-722. [*Selaginella moellendorffii*].

885. Xu, D. L., Jiang, N., Gao, J. G., Wang, Q. X. & Dai, X. L. 2014. Relationship between *Pteris fauriei* and *Pteris biaurita* based on rps4-trnS region sequences analysis. Bulletin of Botanical Research 34(4): 436-439. [Chinese].

886. Xu, G., Zhao, M. J., Sun, N., Ju, C. G. & Jia, T. Z. 2014. Effect of the RW-Cb and its active ingredient like P-acid and P-aldehyde on primary rat osteoblasts. Journal of Ethnopharmacology 151(1): 237-241. [*Cibotium barometz*, medicinal plants, osteoporosis].

887. Xu, H. H., Marshall, J. E. A., Wang, Y., Zhu, H. C., Berry, C. M. & Wellman, C. H. 2014. Devonian spores from an intra-oceanic volcanic arc, West Junggar (Xinjiang, China) and the palaeogeographical significance of the associated fossil plant beds. Review of Palaeobotany & Palynology 206: 10-22. [fossils, spores].

888. Xu, J. Y., Li, H. B., Liang, S., Luo, J. & Ma, L. Q. 2014. Arsenic enhanced plant growth and altered rhizosphere characteristics of hyperaccumulator *Pteris vittata*. Environmental Pollution 194: 105-111.

889. Xu, X., Li, Q., Wang, J., Zhang, L., Tian, S., Zhi, L., Li, Q. & Sun, Y. 2014. Inorganic and organic nitrogen acquisition by a fern *Dicranopteris dichotoma* in a subtropical forest in South China. PLoS One 9(5): e90075. [nitrogen absorption].

890. Xu, Z. & Wang, Y. 2014. Huperzine A attenuates hepatic ischemia reperfusion injury via anti-oxidative and anti-apoptotic pathways. Molecular Medicine Reports 10(2): 701-706. [*Huperzia serrata*, medicinal plants].

891. Yadav, R. K., Abraham, G., Singh, Y. V. & Singh, P. K. 2014. Advancements in the utilization of *Azolla-Anabaena* system in relation to sustainable agricultural practices. Proceedings of the Indian National Science Academy 80(2): 301-316.

892. Yamashita, J., Enomoto, T., Yamada, M., Ono, T., Hanafusa, T., Nagamatsu, T., Sonoda, S. & Yamamoto, Y. 2014. Estimation of soil-to-plant transfer factors of radiocesium in 99 wild plant species grown in arable lands 1 year after the Fukushima 1 Nuclear Power Plant accident. Journal of Plant Research 127(1): 11.-22. [*Athyrium yokoscense*, caesium, *Dryopteris tokyoensis*, Fukushima, radionuclides, soils].

893. Yamauchi, K., Mitsunaga, T. & Batubara, I. 2014. Synthesis of quercetin glycosides and their melanogenesis stimulatory activity in B16 melanoma cells. Bioorganic & Medicinal Chemistry 22(3): 937-944. [cancer, *Helminthostachys zeylanica*, medicinal plants].

894. Yan, R., Zhang, Z., Wang, Y., Yang, H., Zeng, Q. & Zhu, D. 2014. Efficient strategy for maintaining and enhancing the huperzine A production of Shiraia sp Slf14 through inducer elicitation. Journal of Industrial Microbiology & Biotechnology 41(7): 1175-1179. [*Huperzia serrata*].

895. Yanez, A., Arana, M. D., Marquez, G. J. & Oggero, A. 2014. The genus *Dennstaedtia* Bernh. (Dennstaedtiaceae) in Argentina. Phytotaxa 174(2): 69-81.

896. Yang, L., Wang, J., Huang, Y., Hui, D. & Wen, M. 2014. Effects of the interception of litterfall by the understory on carbon cycling in *Eucalyptus* plantations of South China. PLoS One 9(6): e100464. [*Dicranopteris dichotoma*].

897. Yang, R. C., Chang, C. C., Sheen, J. M., Wu, H. T., Pang, J. H. S. & Huang, S. T. 2014. *Davallia bilabiata* inhibits TNF-alpha-induced adhesion molecules and chemokines by suppressing Ikk/Nf-kappa b pathway in vascular endothelial cells. American Journal of Chinese Medicine 42(6): 1411-1429. [medicinal plants, Taiwan].

898. Yang, W. Z., Qiao, X., Bo, T., Wang, Q., Guo, D. A. & Ye, M. 2014. Low energy induced homolytic fragmentation of flavonol 3-O-glycosides by negative electrospray ionization tandem mass spectrometry. Rapid Communications in Mass Spectrometry 28(4): 385-395. [*Drynaria fortunei*, medicinal plants].

899. Yang, X., Yuan, L., Chen, J., Xiong, C. & Ruan, J. 2014. Multitargeted protective effect of *Abacopteris penangiana* against carrageenan-induced chronic prostatitis in rats. Journal of Ethnopharmacology 151(1): 343-351. [China, medicinal plants].

900. Yao, J. N., Li, Z. F., Lou, H. Y., Huang, L., Liang, G. Y., Cao, P. X. & Pan, W. D. 2014. A new ecdysteroidal glycoside from *Lepidogrammitis drymoglossoides* (Bak.) Ching. Journal of Carbohydrate Chemistry 33(4): 206-211. [medicinal plants].

901. Yin, Y., Johns, M. A., Cao, H. & Rupani, M. 2014. A survey of plant and algal genomes and transcriptomes reveals new insights into the evolution and function of the cellulose synthase superfamily. BMC Genomics 15: 260. [*Pteridium aquilinum*].

902. Ying, Y. M., Shan, W. G. & Zhan, Z. J. 2014. Biotransformation of huperzine A by a fungal endophyte of *Huperzia serrata* furnished sesquiterpenoid-alkaloid hybrids. Journal of Natural Products 77(9): 2054-2059. [biotransformation].

903. Yonekura, K. & Sasaki, K. 2014. A new form of *Adiantum pedatum* L. f. *contractum* Yonek. & K. Sasaki (Pteridaceae). Journal of Japanese Botany 89(5): 360-364.

904. Yorke, B. J. 2014. Finding the Holly fern (*Polystichum lonchitis*) on Hutton roof, Cumbria. Pteridologist 6(1): 38-41. [UK].

905. Yoshihara, T., Suzui, N., Ishii, S., Kitazaki, M., Yamazaki, H., Kitazaki, K., Kawachi, N., Kawachi, N., Ito-Tanabata, S., Hashida, S. N., Shoji, K., Shimada, H., Goto, F. & Fujimaki, S. 2014. A kinetic analysis of cadmium accumulation in a Cd hyper-accumulator fern, *Athyrium yokoscense* and tobacco plants. Plant Cell and Environment 37(5): 1086-1096.

906. You, M., Burger, M., Li, L., Zou, W., Li, N., Qiao, Y. & Han, X. 2014. Changes in soil organic carbon and carbon fractions under different land use and management practices after development from parent material of mollisols. Soil Science 179(4): 205-210. [China, *Equisetum tataricus*].

907. Yu, Q., Yu, M., Song, C., Xing, S., Wu, Z., Li, Y., Ren, Z. & Liu, Y. 2014. Flora in Dahaituo Nature Reserve and its relationship with surrounding reserves. Acta Botanica Boreali Occidentalia Sinica 34(6): 1269-1275. [floristics; Chinese].

908. Yu, S., Zhang, L., Chen, C., Li, J., Ye, S., Liu, G., Mei, X., Tang, K. & Luo, L. 2014. Isolation and characterization of BnMKK1 responsive to multiple stresses and affecting plant architecture in tobacco. Acta Physiologiae Plantarum 36(6): 1313-1324. [*Selaginella moellendorffii*].

909. Yuan, T. X., Zhang, H. P., Ou, Z. Y. & Tan, Y. B. 2014. Effects of topography on the diversity and distribution pattern of ground plants in karst montane forests in Southwest Guangxi, China. Chinese Journal of Applied Ecology 25(10): 2803-2810. [biodiversity, plant communities, slope].

910. Yurdakok, B., Kismali, G. & Ozen, D. 2014. Ptaquiloside-induced cytotoxicity in Crandall feline kidney and HGC-27 cells. Oncology Letters 8(4): 1839-1843. [*Pteridium*].

911. Zakaria, Z. A., Yahya, F., Balan, T., Mamat, S. S., Rodzi, R., Kamisan, F. H., Fatimah, C. A. & Ibrahim, A. L. 2014. Pharmacological activities of some of the neglected and underutilized tropical plants in Malaysia. In: Gurib-Fakeem, A. (ed.). Novel plant bioresources: applications in food, medicine and cosmetics. John Wiley: Oxford, UK, pp. 215-225. [*Dicranopteris linearis*, medicinal plants].

912. Zaracho, V. H. 2014. Re-description of the advertisement call of *Vitreorana uranoscopa* (Muller, 1924) (Anura, Centrolenidae) from the Argentinean Atlantic Forest, with notes on natural history. South American Journal of Herpetology 9(2): 83-89.
913. Zazouli, M. A., Mahdavi, Y., Bazrafshan, E. & Balarak, D. 2014. Phytodegradation potential of bisphenol A from aqueous solution by *Azolla filiculoides*. Journal of Environmental Health Science and Engineering 12: 66. [biosorption, phytoremediation].
914. Zazouli, M. A., Mahvi, A. H., Dobaradaran, S., Barafrashtehpour, M., Mahdavi, Y. & Balarak, D. 2014. Adsorption of fluoride from aqueous solution by modified *Azolla filiculoides*. Fluoride 47(4): 349-358. [biosorption].
915. Zeidler, M., Duchoslav, M. & Banas, M. 2014. Effect of altered snow conditions on decomposition in three subalpine plant communities. Central European Journal of Biology 9(8): 811-822. [*Athyrium*].
916. Zeng, W. W. & Lai, L. S. 2014. Characterization of the mucilage isolated from the edible fronds of bird's nest fern (*Asplenium australasicum*). Food Hydrocolloids 40: 163-172.
917. Zeng, Y., Ye, W., Yang, L., Huang, Y., Zhao, K., Zhang, Z., Liang, H. & Kerns, J. 2014. Morphological and molecular characterization of two isolates of *Paratrichodorus porosus* from Shenzhen, China. Helminthologia 51(4): 323-330. [*Gleichenia linearis*, nematodes].
918. Zhang, D. B., Chen, J. J., Zhang, L., Song, Q. Y. & Gao, K. 2014. Bioactive alkaloids from *Palhinhaea cernua*. Phytochemistry Letters 10: 76-79. [medicinal plants].
919. Zhang, J., Li, Y., Chang, S. X., Jiang, P., Zhou, G., Liu, J., Wu, J. & Shen, Z. 2014. Understory vegetation management affected greenhouse gas emissions and labile organic carbon pools in an intensively managed Chinese chestnut plantation. Plant and Soil 376(42036): 363-375. [*Dicranopteris dichotoma*].
920. Zhang, J., Wu, J., Hong, B., Ai, W., Wang, X., Li, H. & Lei, X. 2014. Diversity-oriented synthesis of *Lycopodium* alkaloids inspired by the hidden functional group pairing pattern. Nature Communications 5: 4614.
921. Zhang, L. B. & Liu, H. M. 2014. *Dryopteris damingshanensis* (Dryopteridaceae): a new fern in subgenus *Nothoperanema* from Guangxi, China. Novon 23(1): 119-122.
922. Zhang, L. B., Sun, Q. W. & He, H. 2014. *Selaginella wangpeishanii* (Selaginellaceae), a new lycophyte from a limestone cave in Guizhou, China. Phytotaxa 164(3): 195-199. [*Selaginella gebaueriana, Selaginella wangpeishanii*].
923. Zhang, L. G., Ouyang, X. W., Wu, T. T., Ni, L. J. & Shi, W. Z. 2014. Quantitative evaluation of *in vitro* effects and interactions of active fractions in a Chinese medicinal formula (Yaotongning Capsule) on rat chondrocytes. Journal of Ethnopharmacology 155(3): 1424-1432. [*Davallia mariesii*, medicinal plants].
924. Zhang, L., Zhou, X. M., Gao, X. F. & Zhang, L. B. 2014. *Pteris barklyae* (Pteridaceae): A new combination and neotypication of *Adiantum pallens* for the fern flora of the Indian Ocean Islands. Phytotaxa 174(2): 116-118. [Madagascar, Seychelles].
925. Zhang, M. 2014. Plant floristic diversity in Xianrendong Natural Reserve from Liaodong Peninsula. Acta Botanica Boreali Occidentalia Sinica 34(8): 1693-1698. [biodiversity, China; Chinese].
926. Zhang, M., Dai, S., Heimhofer, U., Wu, M., Wang, Z. & Pan, B. 2014. Palynological records from two cores in the Gongpoquan Basin, central East Asia: evidence for floristic and climatic change during the late Jurassic to early Cretaceous. Review of Palaeobotany & Palynology 204: 1-17.
927. Zhang, S. B., Sun, M., Cao, K. F., Hu, H. & Zhang, J. L. 2014. Leaf photosynthetic rate of tropical ferns is evolutionarily linked to water transport capacity. PLoS One 9(1): e84682. [epiphytes, stomata].
928. Zhang, S., Li, T., Zhang, X., Yu, H., Zheng, Z., Wang, Y., Hao, X. & Pu, Y. 2014. Changes in pH, dissolved organic matter and Cd species in the rhizosphere soils of Cd phytostabilizer

Athyrium wardii (Hook.) Makino involved in Cd tolerance and accumulation. Environmental Science and Pollution Research International 21(6): 4605-4613.

929. Zhang, W. Y., Kuo, L. Y., Li, F. W., Wang, C. N. & Chiou, W. L. 2014. The hybrid origin of *Adiantum meishanianum* (Pteridaceae): a rare and endemic species in Taiwan. Systematic Botany 39(4): 1034-1041.
930. Zhang, Y., Ma, J., Yang, B., Li, R., Zhu, W., Sun, L., Tian, J. & Zhang, L. 2014. The complete chloroplast genome sequence of *Taxus chinensis* var. *mairei* (Taxaceae): loss of an inverted repeat region and comparative analysis with related species. Gene 540(2): 201-209. [China].
931. Zhang, Y., Wang, C., Guo, Z., Zhang, X., Wang, Z., Liang, X. & Civelli, O. 2014. Discovery of N-methyltetrahydroprotoberberines with kappa-opioid receptor agonists-opioid receptor agonist activities from *Corydalis yanhusuo* W. T. Wang by using two-dimensional liquid chromatography. Journal of Ethnopharmacology 155(3): 1597-1602. [China, *Huperzia serrata*, medicinal plants].
932. Zhang, Y., Yi, P., Chen, Y., Mei, Z. N., Hu, X. & Yang, G. Z. 2014. Lycojaponicuminol A-F: cytotoxic serratene triterpenoids from *Lycopodium japonicum*. Fitoterapia 96: 95-102. [medicinal plants].
933. Zhang, Z. Q., Christenhusz, M. J. M., Esser, H. J., Chase, M. W., Vorontsova, M. S., Lindon, H., Monro, A. & Lumbsch, H. T. 2014. The making of world's largest journal in systematic botany. Phytotaxa 191(1): 1-9.
934. Zhang, Z., Sugawara, K., Hatayama, M., Huang, Y. & Inoue, C. 2014. Screening of As-accumulating plants using a foliar application and a native accumulation of As. International Journal of Phytoremediation 16(3): 257-266. [*Pteris vittata*].
935. Zhao, J., Favero, D. S., Qiu, J., Roalson, E. H. & Neff, M. M. 2014. Insights into the evolution and diversification of the AT-hook motif nuclear localized gene family in land plants. BMC Plant Biology 14: 266. [*Selaginella moellendorffii*].
936. Zhao, X. Y., Chen, S. Y., Zhao, L., Zhang, X. M., Ma, P. F. & Guo, Z. H. 2014. Evolution of MIR166 gene family in land plants. Plant Diversity and Resources 36(3): 331-341. [micro RNA].
937. Zheng, C. S., Zhuang, Z. Q., Xu, X. J., Ye, J. X., Ye, H. Z., Li, X. H., Wu, G. W., Xu, H. F. & Liu, X. X. 2014. *In silico* search for multi-target therapies for osteoarthritis based on 10 common Huoxue Huayu herbs and potential applications to other diseases. Molecular Medicine Reports 9(3): 857-862. [China, *Drynaria fortunei*, medicinal plants].
938. Zheng, Z., Gong, D. J., Sun, C. X., Li, X. J. & Li, W. J. 2014. Altitudinal patterns of species richness and species range size of vascular plants in Xiaolongshan Reserve of Qinling Mountain: a test of Rapoport's rule. Chinese Journal of Applied Ecology 25(9): 2477-2485. [altitudinal gradients, biogeography, China, Rapoport's rule; Chinese].
939. Zhong, B., Fong, R., Collins, L. J., McLenachan, P. A. & Penny, D. 2014. Two new fern chloroplasts and decelerated evolution linked to the long generation time in tree ferns. Genome Biology and Evolution 6(5): 1166-1173. [*Dicksonia squarrosa*, *Tmesipteris elongata*].
940. Zhou, S., Dong, W., Chen, X., Zhang, X., Wen, J. & Schneider, H. 2014. How many species of bracken (Pteridium) are there? Assessing the Chinese brackens using molecular evidence. Taxon 63(3): 509-521. [*Pteridium aquilinum*, *Pteridium esculentum*, *Pteridium semihastatum*].
941. Zhu, L. J., Guan, D. X., Luo, J., Rathinasabapathi, B. & Ma, L. Q. 2014. Characterization of arsenic-resistant endophytic bacteria from hyperaccumulators *Pteris vittata* and *Pteris multifida*. Chemosphere 113: 9-16.
942. Zotz, G., Mendieta-Leiva, G. & Wagner, K. 2014. Vascular epiphytes at the treeline - composition of species assemblages and population biology. Flora 209(8): 385-390.
943. Zou, H., Dai, X., Wang, Q. & Cao, J. 2014. Ultrastructural observations on the egg development of the fern *Phymatosorus hainanensis* (Polypodiaceae). Acta Botanica Boreali Occidentalia Sinica 34(5): 925-931. [gametophytes, reproductive biology; Chinese].

944. Zou, H., Xu, K. P., Li, F. S., Zou, Z. X., Liu, R., Liu, R. H., Li, J., Tan, L. H. & Tan, G. S. 2014. Unciflavones A-F, six novel flavonoids from *Selaginella uncinata* (Desv.) Spring. Fitoterapia 99: 328-333. [medicinal plants].

945. Zuquim, G., Tuomisto, H., Jones, M. M., Prado, J., Figueiredo, F. O. G., Moulatlet, G. M., Costa, F. R. C., Quesada, C. A. & Emilio, T. 2014. Predicting environmental gradients with fern species composition in Brazilian Amazonia. Journal of Vegetation Science 25(5): 1195-1207.

946. Zwieniecki, M. A. & Boyce, C. K. 2014. Evolution of a unique anatomical precision in angiosperm leaf venation lifts constraints on vascular plant ecology. Proceedings of the Royal Society Biological Sciences Series B 281(1779): e20132829.

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

Patrick J. Acock	Phylogeny of *Asplenium* and most aspects of *Equisetum* research
Ruth Aguraiuja	Population biology and restoration ecology of endangered fern species
Victor B. Amoroso	Botany; Economic ferns; Histochemical studies (medicinal ferns); Philippine *Cycas*; Morphology and taxonomy
Sayuri Ando	Fern sporophyte development
Raju Antony	Systematic studies of *Selaginella*; Ferns and conservation of ferns
Naomi Arcand	Ecology and biogeography of tree ferns
Ralph C. Archer	Fern horticulture
Nan Crystal Arens	Ecology of tree ferns
Monanjali Bandyopadhyay	Phyto-geography; Ecology; Fern lore; Ethnobotany
Yasmin S. Baksh-Comeau	Vascular flora of Trinidad and Tobago
Julie F. Barcelona	Philippine ferns/floristics; Ecology and conservation; *Odontosoria* systematics; Philippine *Rafflesia*
Wilfried H. Bennert	Ferns and lycopods
Subir Bera	Animal interaction with pteridophytes and its co-evolutionary significance
Kamlesh Bhakuni	Biodiversity, taxonomy and morphology of Central Himalayan ferns
Rodica Bercu	Histo-anatomy of ferns
S.S. Bir	Compilation of index to chromosome numbers of Indian pteridophytes
Michel Boudrie	Pteridophytes of France and of the Guianas (systematics, taxonomy, ecology, distribution)

Siegmar W. Breckle	Ecosystems of the Earth; Ecology of halophytes; Tropical ecology; Desert ecology
Walter Bujnoch	Ferns of Central Europe, especially *Dryopteris affinis*
Manuel G. Caluff	Selaginellaceae; Lycopodiaceae; Polypodiaceae (including Grammitidaceae); Fern culture; Ecology
Jian Guo Cao	Sexual reproduction and development of fern gametophytes
James D. Caponetti	Propagation of ferns by tissue culture
Francisco Carrapico	*Azolla* (general biology and taxonomy)
Kalyan Chakraborti	Phyto-geography; Ecology; Fern lore; Ethnobotany
Wen-Liang Chiou	Gametophyte morphology and development; Reproductive biology; Antheridiogen; Phenology of sporophytes; Fern systematics
Maarten Christenhusz	Fern floras; Island biogeography; Phytotaxa (journal)
Aurea M.T. Colli	Ecology and physiology
Marten W. de Boer	Pteridophytes of Bolivia and East Africa; Herbarium specimen collection
Joshua Der	*Pteridium* biogeography; Fern genomics and transcriptomics; RNA editing; Life cycle evolution
Franz-Georg Dunkel	Rare ferns; Ecology and population biology
Adrian F. Dyer	The biology of soil spore banks and their potential in fern conservation; Ecology of fern gametophytes; Reproductive biology of *Woodsia ilvensis*
Atsushi Ebihara	Speciation; Gametophytes; Hymenophyllaceae
Murray Evans	Pteridophytes of the eastern United States; Taxonomy; Ecology; Natural history
Elizabeth Farnsworth	Ecology, Northeastern ferns; Illustration

Donald R. Farrar	Fern reproduction; *Botrychium systematics*
Kathryn Flinn	Ecology
Harald C. Frank	Tropical ferns in general; *Platycerium*; Ant ferns; *Huperzia*
Christopher R. Fraser-Jenkins	Taxonomy; Floristics; Himalayan and all Asian ferns; *Asplenium, Athyrium, Cheilanthes, Diplazium, Dryopteris, Polystichum, Pteris*; Nepal; Sri Lanka; Assam; Flora of Pakistan; Bangladesh; China; Myanman; Tibet; Bhutan
Stephen C. Fry	Cell wall polysaccharides and enzymes; *Equisetum* tissue culture (callus)
Mary Gibby	Evolution and speciation in ferns; Fern conservation
Arthur V. Gilman	Lycopodiaceae; Ophioglossaceae; Systematics of temperate ferns and allies
Hit Kishore Goswami	Population cytogenetics of *Isoetes* and *Ophioglossum*; Pteridophytes as medicinal plants
Gary K. Greer	Phenotypic plasticity; Polyploidy; Reproductive Ecology; Community assembly; Antheridiogen; Allelopathy
Catharine W. Guiles	Horticulture of temperate-zone ferns, especially those of New England
Irina I. Gureyeva	Taxonomy; Morphology; Biology of ferns of Siberia and Russia, especially taxonomy of *Pteridium* and morphology of the fern spores
Christopher H. Haufler	Patterns and processes of fern evolution; Application of chromosomal, isozymic and DNA data bases in characterizing fern species; Understanding speciation mechanisms and phylogenetic relationships; The significance of polyploidy in pteridophyte evolution
Andreas Hemp	Vegetation ecology
Renier Morejon Hernandez	Taxonomy and conservation of Cuban ferns

Elisabeth A. Hooper	Fern systematics; *Aleuritopteris*
Karsten Horn	Biosystematics, ecology, population biology and distribution of *Diphasiastrum* and *Botrychium* species in Europe; Bibliography of Macaronesian pteridophytes; Conservation strategies for endangered German pteridophytes; Monograph of the genus *Diphasiastrum*
Peter H. Hovenkamp	Polypodiaceae; Nephrolepidaceae; Oleandraceae; Woodsiaceae; Saccolomataceae; Ferns of Sulawesi; Flora Malesiana; Flora of China
Ana M. Ibars	Conservation; Fern spore bank; Germination
Ryoko Imaichi	Shoot apex structure; Evolutionary morphology; Origin of leaves
Filippo Imperato	Chemistry of flavonoids and other phenolics of ferns
Kunio Iwatsuki	Flora of East and Southeast Asia; Hymenophyllaceae; Conservation
Mirkka Jones	Determinants of plant community composition and diversity; Ecology of neotropical ferns
Masahiro Kato	Tropical fern flora; Morphological evolution of vascular plants; Speciation and adaptation of rheophytes; Evolution of apogamous ferns
Michael Kessler	Biodiversity and biogeography of Bolivian montane forests, including pteridophytes; Flora of Bolivian pteridophytes
Johanna H.A. van Konijnenburg-van Cittert	Evolution of fossil fern families, especially Dipteridaceae
S.P. Khullar	Fern floristics; Taxonomy; Cytology and morphology
Yves Krippel	Distribution of pteridophytes in Luxembourg
Rakesh Kumar	*Azolla*/*Anabaena* physiology
Siro Kurita	Speciation; Karyotype evolution; Systematics

Brij Lal	Inventory, conservation, and documentation of pteridophyte-associated traditional knowledge of Indian Himalayan region in particular
Marco Landi	Population ecology
Marcus Lehnert	Taxonomy, phylogeny, ecology and biogeography of pteridophytes; Special expertise in tree ferns
Illia Leitch	Evolution of genome size and karyotype diversity in plants
Blanca León	Taxonomy of neotropical Polypodiaceae, Andes and Peruvian ferns
Bai-Ling Lin	Development; Hormone signaling; Genomics
Stuart Lindsay	Pteridophytes of Thailand, Laos and Cambodia; Vittariaceae of Southeast Asia; Gametophyte biology/ecology; Multi-access keys
David H. Lorence	Pteridophytes of Polynesia, Micronesia, Mascarenes
Kay Lynch	Propagation and conservation of Hawaiian native ferns
P.V. Madhusoodanan	Pteridophytes and bryophytes of South India; *Azolla* species and Cyanobacteria as biofertilizers
Fernando Matos	Taxonomy, biogeography, phylogeny and evolution of *Elaphoglossum*
Sadamu Matsumoto	Cytotaxonomic study of ferns, especially *Cyrtonium*, *Asplenium*, and *Pteris*; Pteridophyte flora of Southern Pacific Islands, Bhutan, Taiwan
J. Mitchell McGrath	Plant breeding; Molecular cytogenetics; Gene duplication
Klaus Mehltreter	Fern ecology; Phenology; Herbivory; Interactions with insects; Invasive species
Aniceto Mendoza Ruiz	Pteridophytes of Mexico; Taxonomy, floristics, cultivation and propagation of ferns

Jordan Metzgar	*Cryptogramma*; Phylogenetics; Polyploidy; *Azolla*; Osmundaceae
John Mickel	Pteridoflora of Mexico; Monographic studies of *Anemia* and *Elaphoglossum*
Vlastimil Mikolas	*Polypodium*; *Asplenium trichomanes* agg.; *Dryopteris*; *Equisetum* and ferns of Oceania
Futoshi Miyamoto	Sino-Japan and Himalayan areas
James D. Montgomery	*Dryopteris* in North America and Mexico; Ferns of Pennsylvania and New Jersey; Ecology of *Botrychium*
Robbin C. Moran	Taxonomy, biogeography, phylogeny and evolution of ferns and lycophytes
Claudine C. Mynssen	*Diplazium*; Brazilian flora
Narumi Nakato	Chromosomes; Polyploidy; Hybridization; Speciation
Maite Niño	Selaginellaceae; Lycopodiaceae; Polypodiaceae (including Grammitidaceae); Fern culture; Ecology
Benjamin Oellgaard	Systematics and biology of the Lycopodiaceae with special reference to neotropical Lycopodiaceae; Pteridophytes of the northern Andes, especially Ecuador; Biology; Taxonomy and diversity; Quantitiave inventories of pteridophytes in sample plots in Ecuador
Sue Olsen	Testing ferns for hardiness and ornamental value and introducing ferns to the public
Leticia Pacheco	Systematics of *Diplazium*
Christopher Page	Biology and ecology of Pteridophyta; Biogeography; Distribution; Insular floras; Paleobotany; *Equisetum*; Patterns, principles, processes and dynamics in pteridophyte ecosystems and their evolution
Santiago Pajaron	Reproductive biology; Population genetics; Systematics and evolution

Daniel Palmer	Hawaiian ferns
Barbara Parris	Monographic studies of Grammitidaceae; Systematics, ecology and phytogeography of Old World pteridophytes particularly in tropical and south temperate regions
Alison Paul	Pteridophyte curation; Macaronesian and European pteridophytes
James H. Peck	Pteridophyte flora of Arkansas
Ana L. Pereira	Plant-cyanobacteria symbioses; Phylogeny; Cyanotoxins; Proteomic, phytoremediation, ecotoxicology of plants by cyanotoxins
Krzysztof Piątek	Fern biogeography
Jefferson Prado	Phylogeny, nomenclature, taxonomy, and geographical distributions of Pteridaceae; Pteridoflora in Brazil
Kathleen Pryer	Phylogenetics of ferns and basal tracheophytes using morphological and molecular data; Systematics of basal fern families, especially Marsileaceae, Hymenophyllaceae, tree ferns, pteroid ferns, ontogeny and phylogeny; Morphometrics
N. Punetha	Morphology, taxonomy and biodiversity of Central Himalayan ferns and lycophytes
Anshita Raj	Phytoremediation; Arsenic; *Pteris vittata* gametophytes
K.P. Rajesh	Ecology, taxonomy and conservation of bryophytes and pteridophytes of Western Ghats
R.G.H. Ranil	Tree ferns
Tom A. Ranker	Systematics, ecology and evolution of tropical ferns
Karen Renzaglia	Morphology; Development; Reproduction; Ultrastructure
Roderick Robinson	Invasive species; *Pteridium*; *Lygodium*; *Azolla*
Gar W. Rothwell	Phylogeny of land plants

Kai Runk	Comparative biology and ecology of Estonian *Dryopteris*; Cultivation of hardy ferns in Estonia, especially *Polystichum* and *Phyllitis scolopendrium* and their cultivars; Hardy East Asian fern species
Arthur E. Salgado	Taxonomy of Southeast Asian ferns; the genus *Asplenium* in the Philippines
Annette Schoelch	Construction morphology; Development of the sporophyll, sporangia, and sori in ferns; Evolution and phylogeny of ferns
Eric Schuettpelz	Evolution, diversification and systematics of leptosporangiate ferns
David Schwartz	Cheilanthoid ferns
Kakali Sen	Fern and lycophytes; Micromorphology, anatomy, gametophyte and reproductive biology; Fern-insect interactions; Phytoliths
Wen Shao	Fern embryology; Pteridophyte taxonomy; Polypodiaceae; *Phymatopteris*
B.D. Sharma	Morphology, anatomy, phytochemistry and experimental studies on pteridophytes; Paleobotany of Mesozoic and tertiary plants
O.P. Sharma	Agronomy; Carcinogenic ferns
Joanne M. Sharpe	Tropical and temperate fern life histories; Long-term studies of demography of tropical pteridophytes; Ecology of rheophytes and New England ferns
Shane W. Shaw	Systematics and evolution of Gleicheniaceae; Insect-fern interactions and *Isoetes* anatomy
Dong Shi-Yong	Taxonomy of Asian tropical ferns; Pteridophyte flora of Southern China
Judith E. Skog	Fern evolution and phylogeny, especially basal ferns - Osmundaceae, Schizaeaceae, Matonianaceae; Relationships with fossil ferns
Tynisha Smalls	Molecular biology of ferns

Alan R. Smith	Phylogeny of pteridophytes; Phylogeny of Polypodiaceae/Grammitidaceae; Floristics of Mexican, Venezuelan and Bolivian ferns and allies; Phytogeography of ferns
V.K. Sreenivas	Molecular phylogeny; Taxonomy; *Pteris*
G.K. Srivastava	*Isoetes*
Michizo Sugai	Photocontrol of spore germination; Sex organ differentiation
John A. Thomson	Taxonomy, evolution and secondary metabolics of *Pteridium*; Bracken fern/insect interactions
Alejandra Vasco	Neotropical pteridophyte taxonomy; *Elaphoglossum*
Olena V. Vasheka	Fern introduction, cultivation of temperate-zone ferns in Ukraine; Pteridophyte conservation
Satish C. Verma	Reproductive biology, cytogenetics, genetics and cytotaxonomy of homosporous ferns
David H. Wagner	Ferns of the Pacific Northwest; *Polystichum*; *Botrychium*; Photomicrography
Florence S. Wagner	Cytology and hybridization in pteridophytes; Monograph of *Botrychium*; Hawaiian pteridophyte flora; Cytology and paraphyses of Hawaiian pteridophytes; Bibliography of Hawaiian pteridophytes
Yasuyuki Watano	Speciation; Apogamy; Intragametophytic selfing
James E. Watkins, Jr.	Fern ecology; Ecophysiology; Reproductive/gametophyte biology
Richard A. White	Vascular plant anatomy and morphology; Systematics and anatomy of the tree ferns (Dicksoniaceae and Cyatheaceae) and allies
Dean P. Whittier	Morphology and development of fern gametophytes; Development of gametophytes of the Ophioglossaceae, Psilotaceae and Lycopodiaceae

Carl-Johan Widén	Phloroglucinol derivatives in ferns
Kenneth A. Wilson	Hawaiian alien ferns; Pteridophyte sporangial morphology
Michael D. Windham	Cytology and phylogeny of ferns; Chelianthoid ferns
Paulo G. Windisch	Neotropical ferns
Paul Wolf	Molecular systematics; Population genetics; Fern phylogeny
George Yatskievych	Systematics of cheilanthoid ferns; Floristics of US (especially Missouri) and Mexico; Conservation
Xian-Chun Zhang	Ferns of the Himalayan region and Southeast Asia
Aurora Zlotnik	Fern anatomy; Plant stomata

Patrick J. Acock
13 Star Lane St Mary Cray
Kent BR5 3LJ UK
pat.acock@btinternet.com

Ruth Aguraiuja
Kloostrimetsa Rd 52
Tallinn 11913 ESTONIA
[372] 606 2699
ruthaguraiuja@hotmail.com
ruth.aguraiuja@botaanikaaed.ee

Victor B. Amoroso
Central Mindanao University
University Town, Musuan
8710 Bukidnon PHILIPPINES
[63] 917 549 5084
Fax: [63] 088 356 1912
amorosovic@yahoo.com

Sayuri Ando
Graduate School of Science
University of Tokyo
7-3-1 Hongo
Tokyo 113-0033 JAPAN
[81] 35 841 4047
a_sayuri@bs.s.u-tokyo.ac.jp

Raju Antony
Tropical Botanic Garden and Research Institute
Palode Thiruvananthapuram District
Kerala 695 562 INDIA
[91] 949 426 9824
Fax: [91] 472 286 9246
rajuantonytbgri@rediffmail.com

Naomi Arcand
Department of Geography
University of Colorado
Boulder CO 80302 USA
[1] 808 227 8694
naomi.arcand@gmail.com

Ralph C. Archer
10505 Trotters Pointe Dr. Apt. 103
Louisville KY 40241-1287 USA
[1] 502 632 1212
ralpharcher@att.net

Nan Crystal Arens
Department of Geoscience
Hobart and William Smith Colleges
Geneva NY 14456 USA
[1] 315 781 3930
arens@hws.edu

Monanjali Bandyopadhyay
Department of Bengali
Vidyasagar University
Midnapore West Bengal INDIA
[91] 033 2556 8943
mananjali.bandyopadhyay@gmail.com
drkalyanchakraborti@rediffmail.com

Yasmin S. Baksh-Comeau
Department of Life Sciences
University of the West Indies
St Augustine TRINIDAD
[868] 224 3704; [868] 662 2002 ext. 84499
Fax: [868] 663 9686
yasmin.baksh-comeau@sta.uwi.edu

Julie F. Barcelona
School of Biological Sciences
University of Canterbury
Private Bag 4800
Christchurch 8140 NEW ZEALAND
[011] 632 522 5846
Fax: [011] 632 527 0306
barceljf@hotmail.com

Wilfried H. Bennert
Plessenweg 28
D-58256 Ennepetal GERMANY
[49] 230 283 3493
wilfried.bennert@rub.de

Subir Bera
Center of Advanced Studies
Department of Botany
University of Calcutta
35 Ballygunge Circular Road
Kolkata 700 019 INDIA
[91] 033 2461 4959 ext. 297
Fax: [91] 033 2461 4849
berasubir@yahoo.co.in

Kamlesh Bhakuni
C/O Bahadur Singh Mehta
Roadways Workshop Pithoragarh
P.O. Ancholi Distt Pithoragarh
Pithoragarh 262530 Uttarkhand INDIA
[91] 941 297 7698; [91] 596 426 4032
Fax: [91] 596 426 4032
kammubhakuni@yahoo.com

Rodica Bercu
Bdul Ferndinand Nr. 61
Bl. A 7, Sc. B, Ap. 43
900721 Constanta ROMANIA
Fax: [40] 404 151 1512
rodicabercu@yahoo.com

S.S. Bir
Manauli House 33 Yadvindra Colony
The Mall Patiala 147 001 INDIA
[91] 175 304 6264
ssbir28@rediffmail.com

Michel Boudrie
16 Rue des Arenes
F-87000 Limoges FRANCE
michelboudrie@orange.fr

Siegmar W. Breckle
Department of Ecology
Wasserfuhr 24-26
D-33619 Bielefeld GERMANY
[49] 52 110 5513
sbreckle@gmx.de

Piet Bremer
Roelingsbeek 1
8033 BM Zwolle THE NETHERLANDS
pietbremer@planet.nl

William R. Buck
New York Botanical Garden
2900 Southern Blvd.
Bronx NY 10458-5126 USA
[1] 718 817 8624
bbuck@nybg.org

Walter Bujnoch
Neuwiese 13
D-54296 Trier GERMANY
[49] 06 511 0542
wrbujnoch@onlinehome.de

Manuel G. Caluff
Jardin de los Helechos de Santiago de Cuba
Carretera del Caney No. 129, La Caridad
Santiago de Cuba, CP 90400 CUBA
manolito@bioeco.ciges.inf.cu

Jian Guo Cao
College of Life and Environmental Sciences
Shanghai Normal University
Shanghai 200234 CHINA
[86] 216 432 2526
cao101@shnu.edu.cn

James D. Caponetti
Division of Biology
University of Tennessee
402 Hesler
Knoxville TN 37996-0830 USA
[1] 865 974 0365 or 6841
jcaponet@utk.edu

Francisco Carrapico
Departmento de Biología Vegetal
F. de Ciencias da Universidade de Lisboa
Centro de Biologia Ambeintal Bloco C2
Campo Grande 1749-016 Lisboa
PORTUGAL
[351] 21 750 0381 ext. 22145
Fax: [351] 21 750 0048
fcarrapico@fc.ul.pt

Kalyan Chakraborti
Bidhan Chandra Krishi Viswavidyalaya
Kalyani Nadia 741235 West Bengal INDIA
033 2556 8943
drkalyanchakraborti@rediffmail.com
monanjali.bandyopadhyay@gmail.com

Wen-Liang Chiou
Division of Forest Biology
Taiwan Forestry Research Institute
53 Nan-Hai Rd
Taipei 100 TAIWAN
[886] 2 2303 9978 ext. 2701
chiou@serv.tfri.gov.tw
chiouwl@gmail.com

Maarten Christenhusz
Royal Botanic Gardens Kew
Richmond Surrey TW9 3AB UK
m.christenhusz@kew.org

Aurea M.T. Colli
180 Joao Mutinelli Porto Ferreira
Sao Paulo State CEP 13.660.000 BRAZIL
[55] 19 581 2683
am-colli@bol.com.br

Marten W. de Boer
Hofbrouckerlaan 27
2341 LM Oegstgeest THE
NETHERLANDS
[31] 71 301 4991
Fax: [31] 65 168 9973
marten.oegst@gmail.com

Joshua Der
Department of Biology
California State University-Fullerton
Fullerton CA 92813 USA
jder@fullerton.edu

Franz-Georg Dunkel
Am Saupurzel 1
D-97753 Karlstadt GERMANY
[49] 93 539 0146
Fax: [49] 9 353 1881
f.g.dunkel@t-online.de

Shashi Dwivedi
Pteridology Laboratory
National Botanical Research Institute
Rana Pratap Marg
Lucknow 226001 Uttar Pradesh INDIA

Adrian F. Dyer
499 Lanark Road West Balerno
Edinburgh EH14 7AL Scotland UK
[44] 131 449 3767
afdyer499@googlemail.com

Atsushi Ebihara
Department of Botany
National Museum of Nature and Science
4-1-1 Amakubo
Tsukuba 305-0005 JAPAN
[81] 29 853 8988
Fax: [81] 29 853 8401
ebihara@kahaku.go.jp

Murray Evans
426 Kibbee Rd
Brookfield VT 05036 USA
[1] 802 276 3576

Elizabeth Farnsworth
New England Wild Flower Society
Framingham MA 01701 USA
efarnsworth@newenglandwild.ord

Donald R. Farrar
Department of EEOB
Iowa State University
Bessey Hall 251
Ames IA 50011 USA
dfarrar@iastate.edu

Kathryn Flinn
Department of Biology
Franklin & Marshall College
P.O. Box 3003
Lancaster PA 17604-3003 USA
kathryn.flinn@gmail.com

Harald C. Frank
Maria-Wart Str. 1
80638 Munich GERMANY
hc.frank@gmx.de

Christopher R. Fraser-Jenkins
Student Guest House Thamel
PO Box 5555
Kathmandu NEPAL
[977] 1 436 5976
Fax: [977] 1 441 3155
chrisopteris@yahoo.co.uk

Stephen C. Fry
Edinburgh Cell Wall Group IMPS DBS
University of Edinburgh
Daniel Rutherford Bldg. The King's Bldgs
Max Born Crescent Edinburgh EH9 3BF
UK
[44] 131 650 5320
Fax: [44] 131 650 5392
s.fry@ed.ac.uk

Mary Gibby
Royal Botanic Garden Edinburgh
20A Inverleith Row
Edinburgh EH3 5LR Scotland UK
[44] 131 248 2973
m.gibby@rbge.org.uk

Arthur V. Gilman
P.O. Box 82
Marshfield VT 05658 USA
[1] 802 426 3272
Fax: [1] 802 485 8422
avgilman@together.net

Hit Kishore Goswami
24 Kaushal Nagar P.O. Misrod
Bhopal 462047 Madhya Pradesh INDIA
[91] 755 280 7950; [91] 942 537 1765
goswamihk@yahoo.com

Gary K. Greer
Biology Department
Grand Valley State University
Allendale MI 49401 USA
[1] 616 331 2813
greerg@gvsu.edu

Catharine W. Guiles
47 Hubbard Lane
Topsham ME 04086 USA
[1] 207 729 3006
guiles.c2@gmail.com

Irina I. Gureyeva
Krylov Herbarium
Tomsk State University
Prospekt Lenina 36
Tomsk 634050 RUSSIA
[7] 382 252 9794
gureyeva@yandex.ru
siberianfern@hotmail.com

Christoph Hartkopf-Froeder
Geologischer Dienst NRW
Postfach 100763
D-47707 Krefeld GERMANY
[49] 215 189 7255
Fax: [49] 215 189 7505
hartkopf-froeder@gd.nrw.de

Christopher H. Haufler
Department of Ecology and Evolutionary Biology
University of Kansas
Haworth Hall
Lawrence KS 66045-2106 USA
[1] 913 864 3255
vulgare@ku.edu

Andreas Hemp
Department of Plant Systematics
University of Bayreuth
95440 Bayreuth GERMANY
andreas.hemp@uni-bayreuth.de

Renier Morejon Hernandez
National Botanical Ggarden
Carretera del Rocio km 3.5 Calabazar Boyeros
C.P. 19230 La Habana CUBA
[53] 7 697 9159
morejon@fbio.uh.cu

Nora Sue Hollis
1932 Bluebird Way
West Plains MO 65775-7702 USA
[1] 417 270 0603
ferngro@att.net

Elisabeth A. Hooper
Biology Department
Truman State University
100 E Normal Street
Kirksville MO 63501-4221 USA
[1] 660 785 4623
lhooper@truman.edu

Karsten Horn
Buero fur angewandte Geobotanik und Landschaftsoekdogie (BaGL)
Frankenstrasse 2
D-91077 Dormitz GERMANY
[49] 913 470 6455
info@karstenhorn-bagl.de

Peter H. Hovenkamp
Naturalis Biodiversity Center
P.O. Box 9514
NL-2300 RA Leiden THE NETHERLANDS
[31] 71 751 7213
peter.hovenkamp@naturalis.nl

Layne Huiet
Department of Biology
Duke University
Box 90338
Durham NC 27708 USA
[1] 919 660 7317
rlh22@duke.edu

Ana M. Ibars
Jardí Botànic de Valencia
Universitat de Valencia
Quart 80
46008 Valencia SPAIN
[34] 96 315 6800
Fax: [34] 96 315 6826
ana.ibars@uv.es

Ryoko Imaichi
Faculty of Science
Japan Women's University
2-8-1 Mejirodai
Tokyo 112-8681 JAPAN
[81] 035 981 3662
ryoko@fc.jwu.ac.jp

Filippo Imperato
Contrada Cugno delle Brecce S.n.c.
85100 Potenza ITALY
[39] 09 716 3318
fern75phil@virgilio.it

Kunio Iwatsuki
815-29 Kamoshida Aoba-Ku
Yokohama 227-0033 JAPAN
[81] 45 962 9761
iwatsuki@spa.nifty.com

Mirkka Jones
Department of Bioscience
Aarhus University
Ny Munkegade 116
8000 Aarhus DENMARK
[358] 2 333 5635
Fax: [358] 2 333 5730
mjones@biology.au.dk

Masahiro Kato
Department of Botany
National Museum of Nature and Science
4-1-1 Amakubo
Tsukuba 305-0005 JAPAN
[81] 75 711 3821
sorang@kahaku.go.jp

Michael Kessler
Systematic Botany
University of Zurich
Zollikerstrasse 107
CH-8008 Zurich SWITZERLAND
michael.kessler@systbot.uzh.ch

B.S. Kholia
Botanical Survey of India
192 Kaulagarh Road
Dehradun 248 195 Uttarakhand INDIA
bskholia_bsi@yahoo.co.in

Johanna H.A. van Konijnenburg-van Cittert
Lab of Paleobotany and Palynology
Budapestlaan 4
3584 CD Utrecht THE NETHERLANDS
[31] 30 253 2635
j.h.a.vankonijnenburg@uu.nl
han.konijnenburg@naturalis.nl

S.P. Khullar
Co-Editor, Indian Fern Journal
H. No. 1633 Sector 7-C
Chandigarh 160 019 Punjab INDIA
[91] 172 279 4484
sp.khullar@gmail.com

Yves Krippel
Rue de Rollingen, 18A
L-7475 Schoos LUXEMBOURG
[352] 69 131 6947
yves.krippel@mnhm.lu

Rakesh Kumar
R.G.M. Govt. College
Joginder Nagar
Mandi 17610 Himachal Pradesh INDIA
rbotany@gmail.com

Siro Kurita
Horinouchi 1288 Kikugawa
Shizuoka Pref. 439-0006 JAPAN
[81] 053 735 1457
shisuan@msf.biglobe.ne.jp

Brij Lal
CSIR-Institute of Himalayan Bioresource Technology
Palampur 176062, Himachal Pradesh INDIA
[91] 981 608 6330
brijlal@ihbt.res.in; brijihbt@yahoo.co.in

Marco Landi
Department of Environmental Science
University of Siena
G Sarfatti Via Mattioli 4
I-53100 Siena ITALY
landi21@unisi.it

Marcus Lehnert
Nees-Institut for Biodiversitat der Pflanzen
Universitat Bonn
Meckenheimer Allee 170
D-53115 Bonn GERMANY
[49] 0228 732268
marlehnert@yahoo.com
mlehnert@yahoo.com

Illia Leitch
Jodrell Lab
Royal Botanic Gardens Kew
Richmond Surrey TW9 3AB UK
[44] 0208 332 5329
i.leitch@kew.org

Blanca León
Plant Resources Center
University of Texas at Austin
Main Bldg Rm 127 100 Inner Campus Dr.
Stop F0404
Austin TX 78712-1711 USA
leon@austin.utexas.edu

Bai-Ling Lin
Genomics Research Center
Academia Sinica (Institute of Plant Biology,
National Taiwan University)
P.O. Box 1-51 Nankang
Taipei 11599 TAIWAN
[886] 2 2787 1256
Fax: [886] 2 2789 9924
bailing@sinica.edu.tw; bailing@ntu.edu.tw

Stuart Lindsay
Gardens by the Bay
18 Marina Gardens Drive
Singapore 018953 SINGAPORE
stuart0lindsay@gmail.com

David H. Lorence
National Tropical Botanical Garden
3530 Papalina Road
Kalaheo Kauai HI 96741 USA
[1] 808 332 7324
Fax: [1] 808 332 9765
lorence@ntbg.org

Kay Lynch
Lā'au Hawai'i; The Hawaiian Fern Project
P.O. Box 5364
Kāne'ohe HI 96744 USA
[1] 808 485 9352
klynch@lava.net
P.V. Madhusoodanan
Malabar Botanical Garden
Calicut Kerala 673014 INDIA
[91] 944 624 7014
pvmadhu@gmail.com
malabarbot.garden@gmail.com

Haja Maideen Kader Maideen
School of Environmental and Natural
Resource Sciences
Universiti Kebangsaan Malaysia
43600 Bangi, Selangor MALAYSIA
[60] 38 921 5983
deen@ukm.my

Fernando Matos
New York Botanical Garden
2900 Southern Blvd.
Bronx NY 10458-5126 USA
[1] 718 817 8663
fbtms@yahoo.com.br

Sadamu Matsumoto
Tsukuba Botanical Garden
National Museum of Nature and Science
Amakubo 4-1-1
Tsukuba 305-0005 JAPAN
[81] 29 853 8824
Fax: [81] 29 853 8998
matumoto@kahaku.go.jp

J. Mitchell McGrath
494D PSSB, USDA-ARS
Michigan State University
1066 Bogue Street
East Lansing MI 48824-1325 USA
[1] 517 355 0271; [1] 517 353 9262
mitchmcg@msu.edu

Klaus Mehltreter
Instituto de Ecologia A.C.
Red de Ecologia Functional
Carretera antigua a Coatepec No. 351
El Haya Xalapa 91070 Veracruz MEXICO
[52] 228 842 1800 ext. 4219
klaus.mehltreter@inecol.mx

Aniceto Mendoza Ruiz
Universidad Autonoma Metropolitana-Iztapalapa
Apartado Postal 55-535
09340 Iztapalapa MEXICO
[52] 555 804 6458
amr@xanum.uam.mx

Jordan Metzgar
Museum of the North
907 Yukon Dr.
Fairbanks AK 99775 USA
[1] 907 474 7109
jsmetzgar@alaska.edu

John Mickel
New York Botanical Garden
2900 Southern Blvd.
Bronx NY 10458-5126 USA
[1] 718 817 8636
jmickel@nybg.org

Vlastimil Mikolas
Hanojska 4
SK-040 13 Kosice SLOVAKIA
[421] 90 378 4087
sorbusaria@azet.sk

Futoshi Miyamoto
Department of Agriculture
Tokyo University of Agriculture
1737 Funako Atsugi City
Kanagawa Pref 243-0034 JAPAN
[81] 46 270 6490
Fax: [81] 46 270 6490
miya@nodai.ac.jp

James D. Montgomery
609 La Salla Street
Berwick PA 18603 USA
[1] 570 759 1322
Fax: [1] 570 542 1625
jimm37@verizon.net

Robbin C. Moran
New York Botanical Garden
2900 Southern Blvd.
Bronx NY 10458-5126 USA
[1] 718 817 8663
rmoran@nybg.org

Claudine C. Mynssen
Instituto de Pesquisas
Jardim Botanico do Rio de Janeiro
Rua Pacheco Leao 915
Rio de Janeiro-RJ 22.460-030 BRAZIL
[55] 213 204 2128
cmynssen@jbrj.gov.br
cmynssen@gmail.com

Narumi Nakato
Narahashi 1-363
Higashiyamato Tokyo 207-0031 JAPAN
n.nakato@eos.ocn.ne.jp

Joan E. Nester-Hudson
Department of Biological Sciences
Sam Houston State University
Box 2116
Huntsville TX 77341 USA
bio_jxn@shsu.edu

Maite Niño
Jardin de los Helechos de Santiago de Cuba
Carretera del Caney No. 129, La Caridad
Santiago de Cuba, CP 90400 CUBA
maite@bioeco.ciges.inf.cu

Benjamin Oellgaard
Institute of Biological Sciences
Ny Munkegade bygn 540
DK-8000 Aarhus C DENMARK
[45] 8 942 4704
Fax: [45] 894 24747
benjamin.oellgaard@biology.au.dk

Sue Olsen
Hardy Fern Foundation
2003 128 Ave. SE
Bellevue WA 98005 USA
[1] 425 747 2998
foliageg@juno.com

Leticia Pacheco
Departmento de Biología
UAM-Iztapalapa
Av. San Rafael Atlixco 186 Col. Vicentina
09340 Mexico DF MEXICO
[52] 55 5804 4690
pacheco@xanum.uam.mx
callipteris07@gmail.com

Christopher Page
Halgarrick Lodge
Quenchwell Road Carnon Downs
Truro Cornwall TR3 6LN UK
[44] 187 286 4439
pterido@hotmail.com

Santiago Pajaron
Departmento Biología Vegetal I
Universidad Complutense
28040 Madrid SPAIN
[34] 91 394 5050
spajbot@ucm.es

Daniel Palmer
3130 Cheney Rd
Maple City MI 49664 USA
[1] 231 334 2520
dan.d.palmer@gmail.com

Barbara Parris
Fern Research Foundation
21 James Kemp Place, Kerikeri
Bay of Islands 0230 NEW ZEALAND
[64] 9 407 5225
barbara2parris@gmail.com

Alison Paul
Department of Life Sciences
The Natural History Museum
Cromwell Road
London SW7 5BD UK
[44] 020 794 25756
Fax: [44] 020 794 25529
a.paul@nhm.ac.uk

James H. Peck
16760 Sandra St.
Cedar Key FL 32625 USA
[1] 501 562 6602
jhpeck@ualr.edu

Ana L. Pereira
CIIMAR/LEGE
Rua dos Bragas 289
4050-123 Porto PORTUGAL
[351] 22 340 1837
anapereira271268@yahoo.com

Krzysztof Piątek
Jodlowa 15A
39-225 Jodlowa POLAND
[48] 69 306 5998
piatek@interia.eu

Jefferson Prado
Herbario SP
Instituto de Botanica
Av. Miguel Estefano 3687
CEP 04301-012 Sao Paulo SP BRAZIL
[55] 11 5067 6088
jprado.01@uol.com.br; jprado@ib.usp.br

Kathleen Pryer
Department of Biology
Duke University
Box 90338
Durham NC 27708 USA
[1] 919 660 7380
pryer@duke.edu

N. Punetha
Department of Botany
Government Postgraduate College
Pithoragarh 262502 Uttarkhand INDIA
[91] 975 916 5372; [91] 596 426 4032
Fax: [91] 596 426 4032
punethan_bot@indiatimes.com

Anshita Raj
CSIR-SRF
National Botanical Research Institute
Rana Pratap Marg
Lucknow 226001 Uttar Pradesh INDIA
anshitaraj_23@yahoo.co.in

K.P. Rajesh
Department of Botany
ZG College; GA College PO
Calicut 673 014 Kerala INDIA
kprajesh.botany@gmail.com

Sabdar Rahaman
Department of Botany
Bangabasi Evening College
19 Raj Kumar Chakraborty Sarani
Kolkata 700 009 INDIA
[91] 98 301 62434
Fax: [91] 98 301 62903
drsrahaman@yahoo.co.in

R.G.H. Ranil
Faculty of Agriculture, Department of Crop Science
University of Peradeniya
Peradeniya 20400 SRI LANKA
rhgranil@gmail.com

Tom A. Ranker
Department of Botany
University of Hawai'i at Mānoa
190 Maile Way Room 101
Honolulu HI 96822 USA
[1] 808 956 3930
ranker@hawaii.edu; tom.ranker@gmail.com

Karen Renzaglia
Department of Plant Biology
Southern Illinois University
Mailcode 6509
Carbondale IL 62901-6509 USA
[1] 618 453 3224
renzaglia@siu.edu

Martin Rickard
Pear Tree Cottage
Kyre, Tenbury Wells
Worcestershire WR15 8RN UK
h.m.rickard@btinternet.com

Roderick Robinson
Landward Consultancy
Shinglebeck, Leavening, Malton
North Yorkshire YO17 9SG UK
[44] 016 536 58271
rcr@landward.org.uk

Gar W. Rothwell
Department of Botany and Plant Pathology
Orgeon State University
2081 Cordley Hall
Corvallis OR 97330 USA
[1] 541 737 5252
rothwell@ohiou.edu
rothwelg@science.oregonstate.edu

Germinal Rouhan
UMR CNRS 7205, Herbier National, CP39
Museum National d'Histoire Naturelle
16 Rue Buffon
F-75231 Paris Cedex 05 FRANCE
[33] 014 079 5380
rouhan@mnhn.fr

Kai Runk
Institute of Ecology and Earth Science
University of Tartu
40 Lai Str
51005 Tartu ESTONIA
[372] 737 6381
Fax: [372] 737 6222
kai.runk@ut.ee

Yoshiaki Sakamaki
Kamijujo 3-25-16
Kita-Ku Tokyo 114-0034 JAPAN
sakamaki@toki.waseda.jp

Arthur E. Salgado
Christian Brothers University
650 East Parkway South
Memphis TN 38104 USA
[1] 901 321 3450
esalgado@cbu.edu

Annette Schoelch
Langgewann 22
D-69121 Heidelberg GERMANY
[49] 622 141 3362
annette.schoelch@t-online.de

Eric Schuettpelz
Department of Botany; Smithsonian Institute
MRC 166 PO Box 37012
Washington DC 20013-7012 USA
[1] 202 633 0914
schuettpelze@si.edu

David Schwartz
9715 Chirtsey Way
Bakersfield CA 93312-5617 USA
[1] 661 588 4027
xericferns@aol.com

Kakali Sen
Department of Botany
Jhargram Raj College, Jhargram
Paschim Medinipur 721507 West Bengal
INDIA
itskakali@gmail.com
itskakali.2013@rediffmail.com

Emily B. Sessa
Department of Biology
University of Florida
521A Bartram Hall
Gainesville FL 32611 USA
[1] 352 392 1098
emilysessa@ufl.edu

Wen Shao
Shanghai Chenshan Plant Science Research Center
Chinese Academy of Sciences, Chenshan Botanical Garden
Shanghai 201602 CHINA
shaowen19792005@163.com

B.D. Sharma
Kath Mandi
Narnaul 123001 Haryana INDIA
[91] 012 822 51427; 09416745650
bdsharma14@yahoo.com

O.P. Sharma
Scientist in Charge/Regional Station
Indian Veterinary Research Institute
Palampur 176061
Himachal Pradesh INDIA
[91] 189 423 0526; [91] 189 423 2918
Fax: [91] 189 423 3063
omsharma53@yahoo.com

Joanne M. Sharpe
Sharplex Services
BO Box 499
Edgecomb ME 04556 USA
joannesharpe@juno.com

Shane W. Shaw
Botany Department
University of Hawai'i at Mānoa
3190 Maile Way
Honolulu HI 96822 USA
[1] 808 956 8369
sws@hawaii.edu

Dong Shi-Yong
South China Botanical Garden
Chinese Academy of Sciences
#723 Xingke Rd
Tlanhe District, Guangzhou 510650 CHINA
[86] 203 725 2716
dongshiyong@scib.ac.cn

Ajit P. Singh
Plant Diversity, Systematics & Herbarium Division
CSIR-National Botanical Research Institute
2-Rana Pratap Marg
Lucknow 226001 Uttar Pradesh INDIA
[91] 0522 22 978 3233 (office)
[91] 800 500 9371 (cell)
ajitpsingh@gmail.com

Sarvesh K. Singh
Department of Botany
University of Allahabad
Allahabad 211002 INDIA
pteridologicalexpress@gmail.com
singhskau@gmail.com

Judith E. Skog
Department of Environmental Science and Policy
George Mason University MSN 4D4
Manassas VA 20110 USA
[1] 703 993 1026
jskog@gmu.edu Judith.Skog@gmail.com

Tynisha Smalls
New York Botanical Garden
2900 Southern Blvd.
Bronx NY 10458-5126 USA
tsmalls@nybg.org

Alan R. Smith
University Herbarium
University of California
1001 Valley Life Sci. Bldg. #2465
Berkeley CA 94720-2465 USA
[1] 510 643 1000
arsmith@berkeley.edu

V.K. Sreenivas
Department of Botany
Sri Vyasa NSS College
Vyasagiri PO 680 623 Wadakanchery
Thrissur-Kerala 673635 INDIA
sreenivasvk@gmail.com

G.K. Srivastava
Department of Botany
University of Allahabad
Allahabad 211 001
Uttar Pradesh INDIA
[91] 0532 264 2606
srivastavagkau@gmail.com

Tom Stuart
PO Box 517
Croton Falls NY 10519 USA
tstuart@westnet.com

Michizo Sugai
Ebisumachi Nakatsugawa
Gifu 508-0037 JAPAN
[81] 57 364 8988
msugai@kc4.so-net.ne.jp

John A. Thomson
Botanic Gardens Trust
National Herbarium of New South Wales
Mrs. Macquaries Road
Sydney NSW 2000 AUSTRALIA
[61] 29 876 4339
pteridium@bigpond.com

Alejandra Vasco
Departmento de Botánica
Instituto de Biología, UNAM
Circuito Exterior s/n, Ciudad Universitaria
A.P. 70-367 MEXICO D.F. C.P. 04510
MEXICO
[52] 555 622 9100
avascog@gmail.com

Olena V. Vasheka
O.V. Fomin Botanical Garden
Taras Shevchenko Kyiv National University
1 Simona Petlury Str.
Kyiv 01032 UKRAINE
[380] 044 234 6056
vasheka_olena@mail.ru

Satish C. Verma
Department of Botany
Panjab University
5452/1, CAT-2 Modern Housing Complex
Manimajra, Chandigarh 160101 INDIA
[91] 172 273 4773
verma1sc@yahoo.co.in

David H. Wagner
Northwest Botanical Institute
1622 Bradley Dr.
Eugene OR 97401-1904 USA
[1] 541 344 3327
davidwagner@mac.com

Florence S. Wagner
Department of Ecology and Evolutionary Biology and University Herbarium
University of Michigan
3600 Varsity Drive
Ann Arbor MI 48108-2287 USA
[1] 734 615 7753
Fax: [1] 734 647 5719
fwagn@umich.edu

Yasuyuki Watano
Department of Biology, Graduate School of Science
Chiba University
Yayoi, Inage-ku
Chiba-shi 263-8522 JAPAN
[81] 43 290-2819
watano@faculty.chiba-u.jp

James E. Watkins, Jr.
Department of Biology
Colgate University
13 Oak Drive
Hamilton NY 13346 USA
[1] 315 228 7660
Fax: [1] 315 228 7997
jwatkins@mail.colgate.edu

Richard A. White
Department of Biology
Duke University
Box 90338
Durham NC 27708 USA
[1] 919 660 7305
rwhite@duke.edu

Dean P. Whittier
126 Heady Drive
Nashville TN 37205-4414 USA
dean.p.whittier@vanderbilt.edu

Carl-Johan Widén
Sulkapolku 6A31
Fin-00370 Helsinki FINLAND
carl-johan.widen@local.net

Kenneth A. Wilson
P.O. Box 39512
Los Angeles CA 90039-0512 USA
[1] 323 661 9021
kwilson@csun.edu

Michael D. Windham
Department of Biology
Duke University
Box 90338
Durham NC 27708 USA
mdw26@duke.edu

Paulo G. Windisch
Universidade Federal do Rio Grande do Sul/Pos-Grad. Em Botanica
Campus do Vale/predio 43433 Avenida Bento Concalves 9500
91501-970 Porto Alegre, RS BRAZIL
pteridos@gmail.com

Paul Wolf
Department of Biology
Utah State University
Logan UT 84322-5305 USA
[1] 435 797 4034
paul.wolf@usu.edu

George Yatskievych
Curator, TEX-LL Herbarium
University of Texas at Austin
Plant Resources Center, Main Bldg, Rm 127
110 Inner Campus Dr, Stop F0404
Austin, TX 78712-1711 USA
[1] 512-471-5094
george.yatskievych@austin.utexas.edu

Xian-Chun Zhang
The National Herbarium (PE)
Institute of Botany, Chinese Academy of Sciences
20 Nan Xin Cun, Xiangshan
100093 Beijing CHINA
[86] 106 283 6291
zhangxc@ibcas.ac.cn

Aurora Zlotnik
Lomas Altas 108 Col. Lomas Altas
Col. Lomas Altas Mexico D.F. 11950
MEXICO
aurz@unam.mx; aurzlo@gmail.com

Gabriela Zuquim
University of Turku
Rajakivenkatu 16 as. 1
Turku 20740 FINLAND
[358] 405 121 981
gabizuquim@gmail.com