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Cover photo: *Thelypteris rhachiflexuosa*, Los Tuxtlas, Veracruz, Mexico (Klaus Mehltreter)

INTRODUCTION

During the preparation of this year´s edition of the ARPR we have been surprised by the number of new contributions on ferns and lycophytes from a wide array of disciplines. Reported new interactions of animals with ferns were especially interesting. The enthusiastic pteridologist may want to read about swans who feed in part on horsetails (reference no. 594), the smoky bush tyrant who uses tree fern scales as nesting material (723), a beetle community of 103 species found in 80 trunks of *Dicksonia antarctica* in Tasmania (219), or 71 ant species inhabiting the root masses of 83 individuals of *Asplenium* spp. in Borneo (200). Have you ever looked for foliar nectaries in *Cyathea*? (848) Do you want to see movies in slow-motion to understand the catapult mechanism of fern sporangia? (547) Horsetails have been used to measure the amount of radiocaesium left after the accident of the Fukushima power plant in Japan (737). A large number of references address just a few species. For example there are reports on the use of alkaloids of *Huperzia serrata* and *Lycopodium* spp. as medicinal drugs, the invasiveness of *Pteridium* spp, the hyperaccumulation of arsenic by *Pteris vittata* and its use in phytoremediation, and the use of *Selaginella moellendorffii* as a genetic reference because of its completely sequenced genome. Hopefully, you will enjoy browsing through this edition and be enlightened by some of the surprising findings in these references.

The *Annual Review of Pteridological Research* (ARPR) provides a comprehensive list of literature citations on ferns and lycophytes published during one calendar year. Production begins after the calendar year ends in order to insure that the Review is as complete as possible. The authors, titles and subjects of the literature cited are indexed. The ARPR also includes a description of research interests and contact information of pteridologists who answered our annual questionnaire.

The ARPR has now been published for 26 years. This year its format has changed slightly (e.g., author names start now always with the last name) to allow for faster indexing. 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. This year's issue contains 933 citations compiled from a search of a variety of on-line databases as well as our annual questionnaire to pteridologists throughout the world. 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. For any 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).

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). 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

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Addendum to Literature Citations (unindexed)

Hardy Fern Foundation Quarterly 2012, vol 22 (1-4).

Rickard, M. 2012. Andean Flora of Ecuador – a fern perspective. Hardy Fern Foundation Quarterly 22(1): 3-6.

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Acock, Patrick	Phylogeny of *Asplenium* and most aspects of *Equisetum* research
Aguraiuja, Ruth	Population biology and restoration ecology of endangered fern species
Antony, Raju	Systematic studies of *Selaginella*; ferns and conservation of ferns
Archer, Ralph	Fern horticulture
Arens, Nan	Ecology of tree ferns
Bennert, Wilfried	Ferns and lycopods
Bercu, Rodica	Histo-anatomy of ferns
Boudrie, Michel	Pteridophytes of France and of the Guianas (systematics, taxonomy, ecology, distribution)
Bujnoch, Walter	Ferns of central Europe, especially *Dryopteris affinis*
Caluff, Manuel	Selaginellaceae, Lycopodiaceae (incl. Grammitidaceae), fern culture, ecology
Cao, Jian, Guo	Sexual reproduction and development of fern gametophytes
Caponetti, James	Propagation of ferns by tissue culture
Chiou, Wen-Liang	Gametophyte morphology and development; reproductive biology; antheridiogen; phenology of sporophytes
Christenhusz, Maarten	Fern floras, island biogeography, Phytotaxa (journal)
Dong, Shi-Yong	Taxonomy of Asian tropical ferns; Pteridophyte flora of southern China
Ebihara, Atsushi	Speciation, gametophytes, Hymenophyllaceae
Farrar, Donald	Fern reproduction; *Botrychium* systematics
Flinn, Kathryn	Ecology
Goswami, Hit	Population cytogenetics of *Isoetes* and *Ophioglossum*; pteridophytes as medicinal plants
Greer, Gary	Phenotypic plasticity, polyploidy, reproductive ecology, community assembly, antheridiogen, allelopathy
Hemp, Andreas	Vegetation ecology
Hooper, Elisabeth	Fern systematics; *Aleuritopteris*
Hovenkamp, Peter	Polypodiaceae, Nephrolepidaceae, Oleandraceae, Woodsiaceae, ferns of Sulawesi, Flora, Malesiana, Flora of China
Imperato, Filippo	Chemistry of flavonoids and other phenolics of ferns
Iwatsuki, Kunio	Flora of East and Southeast Asia; Hymenophyllaceae; Conservation

Jones, Mirkka	Determinants of plant community composition and diversity, ecology of Neotropical ferns
Kato, Masahiro	Tropical fern flora; morphological evolution of vascular plants; speciation and adaptation of rheophytes; evolution of apogamous ferns
Kessler, Michael	Biodiversity and biogeography of Bolivian montane forests, including pteridophytes; flora of Bolivian pteridophytes; flora and conservation of Indonesia
Krippel, Yves	Distribution of pteridophytes in Luxembourg
Kurita, Siro	Speciation, karyotype evolution, systematics
Leon, Blanca	Taxonomy of neotropical Polypodiaceae, Andes and Peruvian ferns
Lin, Bai-Ling	Development and hormone signaling; genomics
Lindsay, Stuart	Pteridophytes of Thailand, Laos, and Cambodia; Vittariaceae of Southeast Asia; gametophyte biology/ecology; multi-access keys
Lorence, David	Pteridophytes of Polynesia, Micronesia, Mascarenes
Lynch, Kay	Propagation and conservation of Hawaiian native ferns
Matos, Fernando	Taxonomy, biogeography, phylogeny and evolution of *Elaphoglossum*
Metzgar, Jordan	*Cryptogramma*, phylogenetics, polyploidy, *Azolla*, Osmundaceae
Mickel, John	Pteridoflora of Mexico; monographic studies of *Anemia* and *Elaphoglossum*
Mikolas, Vlastimil	*Polypodium*, *Asplenium trichomanes* agg., *Dryopteris*, *Equisetum* and ferns of Oceania
Montgomery, James	*Dryopteris* in North America and Mexico; ferns of Pennsylvania and New Jersey; ecology of *Botrychium*
Moran, Robbin	Taxonomy, biogeography, phylogeny and evolution of ferns and lycophytes
Mukhopadhyay, Radhanath	*Selaginella* and ferns
Nakato, Narumi	Cytotaxonomy, cytogeography, apogamy
Page, Christopher	Biology and ecology of Pteridophyta, biogeography, distribution, insular floras, paleobotany, *Equisetum*, patterns principles, processes and dynamics in pteridophyte ecosystems and their evolution
Pajaron, Santiago	Reproductive biology, population genetics, systematics and evolution

Parris, Barbara	Monographic studies of Grammitidaceae; systematics, ecology and phytogeography of Old World pteridophytes particularly in tropical and south temperate regions
Paul, Alison	Pteridophyte curation; Macaronesian and European pteridophytes
Peck, James	Pteridophyte flora of Arkansas; Arkansas vascular flora manual
Pereira, Ana	Plant-cyanobacteria symbioses, phylogeny, cyanotoxins, proteomic, phytoremediation, ecotoxicology of plants by cyanotoxins
Piątek, Krzysztof	Fern biogeography
Prado, Jefferson	Phylogeny, nomenclature, taxonomy, and geographical distribution of Pteridaceae; pteridoflora in Brazil
Pryer, Kathleen	Phylogenetics of ferns and basal tracheophytes using morphological and molecular data; systematics of basal fern families, especially Marsileaceae, Hymenophyllaceae, tree ferns, pteriod ferns, ontogeny and phylogeny; morphometrics
Raj, Anshita	Phytoremediation, arsenic, *Pteris vittata* gametophytes
Rajesh, K.	Ecology, taxonomy and conservation of bryophytes and pteridophytes of Western Ghats
Salgado, Arthur	Taxonomy of Southeast Asian ferns; the genus *Asplenium* in the Philippines
Schoelch, Annette	Construction morphology; development of the sporophyll, sporangia and sori in ferns; evolution and phylogeny of ferns
Schuettpelz, Eric	Evolution, diversification, and systematics of leptosporangiate ferns
Sen, Kakali	Cheilanthoid ferns
Shao, Wen	Fern embryology, pteridophyte taxonomy, Polypodiaceae, *Phymatopteris*
Sharpe, Joanne	Tropical and temperate fern life histories; long-term studies of demography of tropical pteridophytes; ecology of rheophytes and New England ferns
Skog, Judith	Fern evolution and phylogeny, especially basal ferns - Osmundaceae, Schizaeaceae, Matoniaceae
Smith, Alan	Phylogeny of pteridophytes; phylogeny of Polypodiaceae/Grammitidaceae; floristics of Mexican, Venezuelan and Bolivian ferns and allies; phytogeography of ferns
Sreenivas, V.	Molecular phylogeny, taxonomy, *Pteris*

Sugai, Michizo	Photocontrol of spore germination, sex organ differentiation
Thomson, John	Taxonomy, evolution and secondary metabolics of *Pteridium*; bracken fern/insect interactions
van Konijnenburg-van Cittert. J.H.	Evolution of fossil fern families, especially Dipteridaceae
Vasco, Alejandra	Neotropical pteridophyte taxonomy, *Elaphoglossum*
Vasheka, Olena	Fern introduction, cultivation of temperate-zone ferns in Ukraine, pteridophyte conservation
Wagner, David	Ferns of the Pacific Northwest; *Polystichum*, *Botrychium*
Wagner, Florence	Cytology and hybridization in pteridophytes; monograph of *Botrychium*; Hawaiian pteridophyte flora; cytology and paraphyses of Hawaiian pteridophytes; bibliography of Hawaiian pteridophytes
Whittier, Dean	Morphology and development of fern gametophytes; development of gametophytes of the Ophioglossaceae, Psilotaceae and Lycopodiaceae
Wilson, Kenneth	Hawaii alien ferns; pteridophyte sporangial morphology

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