

**Office of Arid Lands Studies  
College of Agriculture  
The University of Arizona**

**Faculty and Staff**

**Publications and Presentations**

**1998**

**Compiled by Sydney Hutchinson**

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## Peer Review Journal Publications

Ayerza, R. and **W.E. Coates**. 1998. Evaluation of Kenaf Production in Subtropical Argentina. Accepted for publication in *Tropical Science*.

Ayerza, R. and **W.E. Coates**. 1998. An Omega-3 Fatty Acid Enriched Chia Diet: Influence on Egg Fatty Acid Composition, Cholesterol and Oil Content. Accepted for publication in the *Canadian Journal of Animal Science*.

**Coates, W.E.** Evaluation of Cutting Devices for Hesperaloe Harvesting. Accepted for publication in *ASAE Applied Engineering in Agriculture*.

**Coates, W.E.** and R. Ayerza. 1998. Commercial Production of Chia in Northwestern Argentina. *Journal of the American Oil Chemists Society*, 75(10):1417-1420.

Cornuelle, T.L. and **J.J. Hoffmann**. 1998. 15-*beta*-Glycosylation of the Quassinoid glaucarubolone by Root Cultures of *Castela emoryi*. *Planta Medica*. Submitted.

Gerba, C.P., J.A. Thurston, J.A. Falabi, P.M. Watt, and **M.M. Karpiscak**. 1998. Optimization of Artificial Wetland Design for Removal of Indicator Microorganisms and Pathogenic Protozoa. *Water Science and Technology*. Submitted.

**Gunatilaka, A.A.L.**, V. da S. Bozani, E. Dagne, G.A. Hofmann, R.K. Johnson, F. L. McCabe, M.R. Mattern, and D.G.I. Kingston. 1998. Limonoids Showing Selective Toxicity to DNA Repair-Deficient Yeast and other Constituents of *Trichilia emetica*. *J. Nat. Prod.* 61(2):179-184.

Gutierrez, C., A. Gonzalez-Coloma and **J.J. Hoffmann**. 1998. Antifeedant properties of natural products from *Parthenium argentatum*, *P. argentatum* x *p. tomentosum* (Asteraceae) and *Castela emoryi* (Simaroubeaceae). *Journal of Industrial Crops and Products*. Accepted.

Huang, K.S., J.Y. Liang, **A.A.L. Gunatilaka**, and L. Yang. 1998. 2-Deoxytaxinine B: A New Taxane Diterpenoid from *Taxus chinensis*. *Phytochemistry* 47(1):69-72

**Hutchinson, B.**, J. Henzel, S. Ram, F. Currim, and B. Timmermann. Developing Information Products for an International Biodiversity Project. *International Association of Agricultural Information Specialists Quarterly Bulletin*. In review.

**Hutchinson, B.**, J. Henzel, S. Ram, C. Casler and B. Timmermann. Information Management, Dissemination, and Related Training in the Bioactive Agents from Dryland Biodiversity Project in Latin America Project. Part of a Chapter submitted to the *Journal of Pharmaceutical Biology*, special supplement on the ICBG program. In review.

Kaisheng, H., Liang Jingyu, and **A.A.L. Gunatilaka**. 1998. Studies on <sup>1</sup>H-NMR of Naturally Occurring Taxane Diterpenoids and Revising Suggestions on some Structures. *J. China. Pharmaceutical University* 29(4):259-266.

**Karpiscak, M.M.**, T.M. Babcock, G.W. France, J. Zauderer, S.B. Hopf, and K.E. Foster. 1998. Evaporative Cooler Water Use Within the City of Phoenix. *Journal of American Water Works Association* 90:121-130.

**Karpiscak, M.M.**, R.J. Freitas, C.P. Gerba, L.R. Sanchez, and E. Shamir. 1998. Management of Dairy Waste in the Sonoran Desert Using Constructed Wetland Technology. *Water Science and Technology*. Submitted.

**Karpiscak, M.M.** and G.J. Gottfried. 1998. Tree Production in the Sonoran Desert Using Effluent and Water Harvesting. Arizona-Nevada Academy of Science 42nd Annual Meeting, Glendale, Arizona. April 18, 1998. *Hydrology and Water Resources in Arizona and the Southwest*, Vol 28:37-45.

Kingston, D.G.I., A.G. Chaudhary, M.D. Chordia, M. Gharpure, **A.A.L. Gunatilaka**, P. I. Higgs, J. M. Rimoldi, L. Samala, P. G. Jagtap, P. Giannakakou, Y.Q. Jiang, C.M. Lin, E. Hamel, B. H. Long, C.R. Fairchild, and K.A. Johnston. 1998, Synthesis and Biological Evaluation of 2-Acyl Analogues of Paclitaxel (Taxol). *J. Med. Chem.* 41(19):3715-3726.

Liang, J.Y., K.S. Huang, and **A.A.L. Gunatilaka**. 1998. A New 1,2-Deoxytaxane Diterpenoid from *Taxus chinensis*. *Planta Medica* 64(2):187-188.

Liang, J.L., K.S. Huang, **A.A.L. Gunatilaka** and L. Yang. 1998. Two New Taxane Diterpenoids from *Taxus Chinensis*. *Chin. Chemical Letters* 9(1):45-49.

Maatooq, G.T. and **J.J. Hoffmann**. 1998. Ceanofendlin Pentaacetate: A new aryltetralin from *Ceanothus fendleri*. *Mansoura Journal of Pharmaceutical Sciences* 14:105-116.

**Maingi, J.** and **Marsh, S.E.** 1999. Assessment of Environmental Impacts of River Basin Development on the Riverine Forests of Eastern Kenya Using Multitemporal Satellite Data. Submitted.

**Maingi, J.** and **Marsh, S.E.** 1999. Changes in Hydrology and Floodplain Vegetation due to River Basin Development on the Tana River, Kenya. Submitted.

**Maingi, J.** and **Marsh, S.E.** 1999. Environmental Change and Ecology of the Tana Riverine Forests, Kenya. In preparation.

**Marsh, S.E.**, Wallace, C., Walker, J. and Miller, J. 1999. Correlation of Vegetation Indices and Landscape Characteristics to the Distribution of the Endangered Sonoran Pronghorn Antelope. In preparation.

**McLaughlin, S. P.**, and R. R. Williams. Carbohydrates and flowering in *Hesperaloe funifera* K. Koch (samandoque). Submitted.

**McLaughlin, S. P.**, R. R. Williams, A. R. Anouti, D. A. Ravetta, and J. M. Nelson. Resource limitations to flowering and fruit set in *Hesperaloe funifera* (Agavaceae). Submitted.

Quiñónez, M. de J., **M.M. Karpiscak** and C.P. Gerba. 1998. Removal of Pathogenic and Indicator Microorganisms by a Constructed Wetland Receiving Untreated Domestic Wastewater. *Water Science and Technology*. Submitted.

Waechter, G.A., **J.J. Hoffmann**, T. Furbacher, M.E. Blake and B.N. Timmermann. 1999. Antibacterial and Antifungal Flavanones from *Eysenhardtia texana*. *Phytochemistry, minor*. Revised version resubmitted.

**Weiss, E., Marsh S.E. and Pfirman, E.** 1999. Application of NOAA-AVHRR Time-Series NDVI Data to Assess Changes in Saudi Arabia's Rangelands. Submitted.

### Other Journal Publications, Pamphlets, Reviews & Abstracts

- Coates, W.E.** 1998. Alternative Sources for n-3 fatty acids. *Inform*, 9(12):1108-1116.
- Coates, W.E.** 1998. Chia and Chickens: A Heartening Combination. *ASAE Resource*, June 1998, p 3.
- Coates, W.E.** 1998. Chia-Fed Chickens Lay Low-Fat Eggs. *Food Ingredient News*, April 1998, p 7.
- Coates, W.E.** 1998. Chia for Your Pet - if it Clucks. *Science News*, April 4. 153(14):223.
- Coates, W.E.** 1998. Gaining Control. *California Farmer*, March 1998, p24-25, 28-29.
- Coates, W.E.** 1998. Los Huevos que Protegen al Corazón. *Noticias*, 20 de Junio, p 100-104.
- Coates, W.E.** 1998. Stalk Grave Digger. *California Farmer*, April 1998, p36, 38.
- Coates, W.E.** 1998. This Plow Stops Traffic. *Cotton Grower*, January 1998, p39.
- Coates, W.E.** and R. Ayerza. UA Research Produces Eggs With Better Fatty Acid Profile. U of A press release issued February 20.
- Coates, W.E.**, W. McCloskey and S. Husman. 1998. Mechanical Weed Control for Cotton. Cotton Engineering Systems Conference, Beltwide Cotton Conferences, San Diego, California. January 5-9.
- Coates, W. E.** 1998. New Crop Trials in the Patagonia Region of Argentina. New Crops & New Uses: Biodiversity and Agricultural Sustainability meeting. Phoenix, Arizona. November 8-11.
- Gunatilaka, A.A.L.** 1998. Book Reviews. *Advances in Experimental Medicine and Biology*, Vol. 404: Saponins Used in Traditional and Modern Medicine, and Vol. 405: Saponins Used in Food and Agriculture. *Journal of Natural Products* 61(2):309-310.
- Hutchinson, B.** 1998. Members on the Move Around the World. *Information Outlook* 2(1):7.
- Karpiscak, M.M.**, R.J. Freitas, C.P. Gerba, L.R. Sanchez, and E. Shamir. 1998. Management of Dairy Waste in the Sonoran Desert Using Constructed Wetland Technology. Submitted to 6th International Conference of the International Association on Water Quality, Wetland Systems for Water Pollution Control, September 27-October 2, 1998, Sao Pedro, Brazil. pp. 16-17.

Freitas, R.J., **M.M. Karpiscak** and Eylon Shamir. 1999. Subsurface Monitoring of Livestock-derived Nitrogen Beneath a Constructed Wetland in the Arid Southwest. Submitted to Third National Workshop on Constructed Wetlands/BMP, June 1999, New Orleans, Louisiana.

## Books, Book Chapters, and Conference Proceedings

**Gunatilaka, A.A.L.** and D.G.I. Kingston. 1998. ADNA-Damaging Natural Products with Potential Anti-cancer Activity. In *Studies in Natural Products Chemistry*, Vol. 20. Atta-ur-Rahman, ed. Amsterdam:Elsevier Science Publishers, pp. 457-505.

Hartmann, H.C., T.C. Pagano, **S.E. Marsh**, and S. Sorooshian (1998). Identifying teleconnections between climate events and ecoregional vegetation behavior in the southwest U.S. using hypertemporal AVHRR data and standardized principal component analysis. In: *Proceedings, Ninth Symposium on Global Changes Studies*, American Meteorological Society, Boston, MA, pp. 277-281.

**Hutchinson, C.F.** 1998. Social science and remote sensing in famine early warning. Diana Liverman, Emilio Moran, Ronald Rindfuss, and Paul Stern eds. *People and Pixels: Linking Remote Sensing and Social Science*. National Academy Press. Washington. Pp. 189-196.

MacArthur, R., Ward, H., Lamar, C., McCormick, G., **Pfirman, E., Marsh, S.** 1998. Communities of Learning Benefit from GIS/LIS. In *Proceedings GIS/LIS Annual Conference*, November 1998, Fort Worth, Texas.

**McLaughlin, S. P.** 1998. Exotic species in the western United States. Solicited book chapter, submitted.

Quanrud, D., R. Arnold, M. Massaro, L.G. Wilson, K. Lansey, **M.M. Karpiscak**, G. Seidel, C.P. Gerba, and R. Bassett. 1998. Soil-Aquifer Treatment Research at The University of Arizona: A Review. Submitted.

Ram, S., Venkatasubramanian, Yool, S., **Marsh, S.** and Park, J., 1998. An Intelligent Agent Based Toolkit Discovering and Accessing Distributed Earth Observing Data. In *Proceedings EOGE098*, February 1998, Salzburg, Austria.

### **Edited Volumes and Newsletters**

**Haseltine, M.** 1998. *BioD Prospects Newsletter* (for the biodiversity project, Bioactive Agents from Dryland Plants of Latin America), 4:2 and 5:1. Also web version.

**Haseltine, M.** 1998. *Tierras Aridas: Conexiones* (for the Chile Linkages Project), 4:1, 4:2, and 5:1. Also web versions.

**Waser, K.** 1998. *Arid Lands Newsletter*, volumes 43, 44.

**Waser, K.** and **E. Cubbins**, eds. 1998. *IALC Newsletter*, nos. 30-40.

## Presentations, Talks, and Posters

**Coates, W.** 1998. Cobertura y Eficacia de Varios Tipos de Aspersoras en Campo. Tecnología en la Aspersión de Agroquímicos. May 19. Celaya, Guanajuato, Mexico. Invited paper.

**Coates, W.E.** 1998. Mecanización de Cultivos Intensivos y Nuevos. Workshop presented at CLIR meeting, La Plata, Argentina, November 19.

**Coates, W.E.** 1998. Mecanización de Cultivos. Algodão: Experiência do Arizona X Potencial do Ceará. Fortaleza, Brazil, December 17. Invited paper.

**Coates, W.E.** 1998. Particulates and Agricultural Tillage Systems. Air Quality Research and Agriculture meeting. June 12. Phoenix, Arizona. Invited paper.

**Coates, W.E.** 1998. Potential of Industrial Crops in Latin America. De México al Mundo II, El Potencial Económico de los Productos Agropecuarios Comercialmente No Tradicionales. October 2. Mexico City, Mexico. Invited paper.

**Coates, W.** 1998. Radio interview March 30 on Science Update. "Chia Chicken Chow," aired May 5, 1998 on Mutual Broadcasting's *America in the Morning*.

**Coates, W.E.,** W. McCloskey and S. Husman. Reduced Herbicide Use Through Improved Mechanical Cultivation and Banding of Herbicides. Poster presented at SARE National Conference, Austin, Texas. March 5-7.

**Coates, W.E.** and G. W. Thacker. 1998. Single Pass Plowdown System for Agricultural Residues. Presented at the SAE International Off-Highway & Powerplant Congress and Exhibition, Milwaukee, Wisconsin. September 14-16.

Freitas, R.J., **M.M. Karpiscak**, C.P. Gerba, L.R. Sanchez, and E. Shamir. 1998. Waste Treatment Incorporating Constructed Wetlands at a Commercial Dairy, 11th Annual Symposium of the Arizona Hydrological Society, Water at the Confluence of Science, Law and Public Policy. September 24-26, 1998, Tucson, Arizona.

Furbacher, T.R., and **A.A.L. Gunatilaka**. 1998. Mechanism-based Search for Natural and Semi-synthetic Anticancer Agents. Poster presented at *Arizona Cancer Center 6<sup>th</sup> Annual Science Fair*.

Furbacher, T.R., **J.J. Hoffmann**, and **A.A.L. Gunatilaka**. 1998. Topoisomerase II Activity of Quinonemethide Triterpenoids. Poster presented at the *14<sup>th</sup> Annual Rocky Mountain Regional Meeting of the American Chemical Society*, O24.

Gerba, C.P., J. Thurston, J. Falabi, P. Watt and **M.M. Karpiscak**. Optimization of Artificial Wetland Design for Removal of Pathogenic Virus and Protozoa. Second International Conference on Advanced Wastewater Treatment, Recycling and Reuse, International Association on Water Quality, Milan, September 14-16, 1998. Vol. 1, pp. 527-534.

**Gunatilaka, A.A.L.** 1998. "Natural Product-based Anticancer Agents with DNA-damaging Activity." Invited plenary lecture, 7th International Symposium on Natural Product Chemistry, Karachi, Pakistan, January, 1998..

**Gunatilaka, A.A.L.**, N.E. Jacobsen, J.Y. Liang, K.S. Huang, and L. Yang. 1998. Novel Taxane Diterpenoids from the Chinese Yew, *Taxus chinensis*. *Proceedings, 14<sup>th</sup> Annual Rocky Mountain Regional Meeting of the American Chemical Society*, 58.

**Hutchinson, B.** 1998. "International Relations in the Special Libraries Association." Presented to the Transportation Division, Special Libraries Association, June 10, 1998.

**Hutchinson, B.** 1998. "The Librarian as an Entrepreneur." Presentation to the University of Arizona Library faculty and staff, invited lecture. June 17, 1998.

**Hutchinson, B.** 1998. "Introducing the Agriculture Network Information Center." Presentation at the Natural Resources Information Council conference, University of Alaska, Juneau, July 29, 1998; also to the UA Institute for Study of Planet Earth (ISPE) and Southwest Climate Assessment Project groups, Tucson, August 11, 1998.

**Hutchinson, B.** 1998. "The AgNIC Experience in Web Site and Content Development in a Distributed Environment." Presentation with the National Agricultural Library and Cornell University at the American Society for Information Science Annual Conference, Pittsburgh, PA, October 26, 1998.

**Hutchinson, B.** and J. Pfander. Rangeland Ecosystems: Managing the Information Holistically: The Arizona AgNIC Project. 9th U.S./Mexico Border States Conference on Recreation Parks and Wildlife, Tucson, Arizona, June 4, 1998. (Poster Session).

**Karpiscak, M.M.** and **K.E. Foster**. Water Conservation and Reuse. Appropriate Technology for Rapidly-Developing Urban Areas: the Arizona Experience. *At The Conference on Exploring Alternative Water Sources*, Clearwater, Florida. February 12-13, 1998. Invited lecture.

**Karpiscak, M.M.**, R.J. Freitas, C.P. Gerba, L.R. Sanchez, and E. Shamir. 1998. Management of Dairy Waste in the Sonoran Desert Using Constructed Wetland Technology. 6th International Conference of the International Association on Water Quality, Wetland Systems for Water Pollution Control, September 27-October 2, 1998 (Sao Pedro, Brazil).

**Karpiscak, M.M.** and G.J. Gottfried. 1998. Tree Production in the Sonoran Desert Using Effluent and Water Harvesting. Arizona-Nevada Academy of Science 42nd Annual Meeting, Glendale, Arizona. April 18, 1998.

**Karpiscak, M.M.** and R. Wass. 1998. Research Needs for Constructed Wetlands in Arizona. Arizona Water & Pollution Control Association, Arizona Section of American Water Works Association, 71st Annual Conference, Chandler, Arizona. May 6-8, 1998.

**McLaughlin, S. P.** 1998. "Plant domestication in the 20<sup>th</sup> Century: A case study with *Hesperaloe funifera* (Agavaceae)." Invited Seminar, Department of Plant Sciences, Arizona State University, April 3, 1998.

**McLaughlin, S. P.** 1998. "Exotic plants of the western United States." Invited speaker, Symposium on Invasive Species in Sonoran Desert Ecosystems, Arizona-Sonora Desert Museum, May 2, 1998.

**McLaughlin, S. P.**, and R. R. Williams. "Carbohydrates and flowering in *Hesperaloe funifera* K. Koch (samandoque)." Invited presentation. Segundo Simposio Internacional Sobre Agaváceas, 7<sup>th</sup> Congreso Latinoamericano de Botánica.

Nokes, R., C.P. Gerba and **M.M. Karpiscak**. Removal of Enteric Organisms in Small Scale Constructed Wetlands. Poster presented at Arizona Water & Pollution Control Association, Arizona Section of American Water Works Association, 71st Annual Conference, Chandler, Arizona. May 6-8, 1998.

Rohovit, L., **M.M. Karpiscak** and J. Artiola. Nutrient and Heavy Metal Concentrations Observed in Plants Grown in Constructed Wetlands. Poster presented at Arizona Water & Pollution Control Association, Arizona Section of American Water Works Association, 71st Annual Conference, Chandler, Arizona. May 6-8, 1998.

**Web Pages**  
**Designed and Maintained by the Arid Lands Information Center**

— Arizona AgNIC Rangeland Management  
<http://ag.arizona.edu/agnic/range.html>.

— Arizona Vegetable Crop Production Group (COA Extension)  
<http://ag.arizona.edu/extension/programs/vegetables/program.html>

— Bioactive Agents from Dryland Biodiversity of Latin America  
<http://ag.arizona.edu/OALS/ICBG/bio-home.html>.

— International Arid Lands Consortium  
<http://ag.arizona.edu/OALS/IALC/Home.html>.

— Office of Arid Lands Studies, Arid Lands Information Center Information Service, and *Arid Lands Newsletter* collection of web sites  
<http://ag.arizona.edu/OALS/oals/oals.html>.

— Office of International Agricultural Programs  
<http://ag.arizona.edu/oiap>

— Udall Center for Studies in Public Policy  
<http://udallcenter.arizona.edu/>

— Morris K. Udall Foundation  
<http://udallfoundation.org/>

— UNCCD Information Network Project  
<http://ag.arizona.edu/OALS/CSTCCD>

— University Development Linkages Project  
<http://ag.arizona.edu/OALS/oals/proj/linkages/chillink.html>

— U.S. Agricultural Information Network  
<http://ag.arizona.edu/OALS/usain/usain.html>

— Watershed Management in the Southwest: With Information from the Beaver Creek Biosphere Reserve  
<http://ag.arizona.edu/OALS/watershed/index.html>

## **Patents**

**Coates, W.E.** and M. Siemens. 1998. Machine for Separating Bindings and Covers from Recyclable Paper Items. Patent disclosure submitted March, U of A preparing patent application.

**Coates, W.E.** 1998. A Device to Extract Juice and Gel from Aloe Vera Leaves. Patent disclosure submitted in August.