

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

Faculty and Staff

Publications and Presentations

1999

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Peer Review Journal Publications

Ayerza, R. and **W.E. Coates**. 1999. An Omega-3 fatty acid enriched chia diet: Influence on egg fatty acid composition, cholesterol and oil content. *Canadian Journal of Animal Science*, 79:53-58.

Ayerza, R. and **W.E. Coates**. 1999. Evaluation of kenaf production in subtropical Argentina. *Tropical Science*, 39:85-90.

Clay, G.R., and **Marsh, S.E.** 1999 Monitoring of forest transitions using scanned ground photographs as a primary data source. *Photogrammetric Engineering and Remote Sensing* (Accepted).

Coates, W.E. 1999. Evaluation of cutting devices for *Hesperaloe* harvesting. *ASAE Applied Engineering in Agriculture*, 15(3):183-187.

Gerba, C.P., J.A. Thurston, J.A. Falabi, P.M. Watt, and **M.M. Karpiscak**. 1999. Optimization of artificial wetland design for removal of indicator microorganisms and pathogenic protozoa. *Water Science and Technology*, 40(4-5):363-368.

Gunatilaka, A.A.L., F.D. Ramdayal, M.H. Saragiotto, D.G.I. Kingston, D.L. Sackett, and E. Hamel. 1999. Synthesis and biological evaluation of novel Paclitaxel (Taxol) D-ring modified analogues. *J. Org. Chem.* 64, 2694-2703.

Gunatilaka, A.A.L., S.K. Pathirana, G.P. Wannigama, N.S. Kumar, H.R.W. Dharmaratne, and S. Sotheeswaran. 1999. A convenient synthesis of 8,9-Dihydro-9-(toluene-p-thio)-carvone, V. Sandanayake, V. Karunaratne. *Ceylon Journal of Science*, 5(1): 1-5.

Gunatilaka, A.A.L., V.J. Paul, P.U. Park, M.P. Puglisi, A.D. Gitler, D.S. Eggleston, R.C. Haltiwanger and D.G.I. Kingston. 1999. Apakaoctodenes A and B: Two tetrahalogenated monoterpenes from the red marine alga *Portieria hornemanii*. *J. Nat. Prod.*, 62: 1376-1378.

Gutierrez, C., A. Gonzalez-Coloma and **J.J. Hoffmann**. Antifeedant properties of natural products from *Parthenium argentatum*, *P. argentatum* x *P. tomentosum* (Asteraceae) and *Castela emoryi* (Simaroubaceae). *Journal of Industrial Crops and Products*, 10:35-40.

Hutchinson, B., J. Henzel, S. Ram, 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 (Accepted).

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* (Accepted).

Karpiscak, M.M., A.M. Stewart, R.D. Wass and F.A. Amalfi. 2000. Constructed wetland technology and mosquito populations in Arizona. *Journal of Arid Environments* (Submitted).

Karpiscak, M.M., R.J. Freitas, C.P. Gerba, L.R. Sanchez, and E. Shamir. 1999. Management of dairy waste in the Sonoran Desert using constructed wetland technology. *Water Science and Technology*, 403(3):57-65.

Kepner, W.G., C.J. Watts, C.M. Edmonds, J.K. Maingi, **S.E. Marsh**, and G. Luna. In press. A landscape approach for detecting and evaluating change in a semi-arid environment. *Journal of Environmental Monitoring and Assessment*.

Maingi, J.K. and **S.E. Marsh**. In press. Assessment of environmental impacts of river basin development on the Riverine Forests of eastern Kenya using multi-temporal satellite data. *International Journal of Remote Sensing*.

Maingi, J.K. and **S.E. Marsh**. Changes in hydrology and floodplain vegetation due to river basin development on the Tana River, Kenya. *Journal of Arid Environments* (Submitted).

McLaughlin, S.P. and R.R. Williams. Carbohydrates and flowering in *Hesperaloe funifera* (Koch) Trel. (samandoque). *Boletin de la Sociedad Botanica de Mexico* (Accepted).

McLaughlin, S.P. Properties of paper made from fibers of *Hesperaloe funifera* (Agavaceae). *Economic Botany* (Accepted).

McLaughlin, S.P., R.R. Williams, A.R. Anouti, D.A. Ravetta, and J.M. Nelson. Allocation of resources to flowering and fruit production in *Hesperaloe funifera* (Agavaceae.) *Journal of Arid Environments* (Accepted).

Mujoo, K., V. Haridas, **J.J. Hoffmann**, G.A. Waechter, L.K. Hutter, M.E. Blake, Y. Lu, G.B. Mills, and J.U. Guttermann. 1999. Triterpenoid saponins from *Acacia victoriae* (Benth.) decrease tumor cell proliferation, induce apoptosis, and inhibit phosphatidylinositol-3-kinase, NF-kB, and inducible nitric oxide synthase. *J. Biol. Chem.* (Submitted).

Nissanka, A.P.K., V. Karunaratne, B.M.R. Bandara, V. Kumar, T. Nakanishi, M. Nishi, A. Inada, L.M.V. Tillekeratne, D.S.A. Wijesundera and **A.A.L. Gunatilaka**. In press. Antimicrobial alkaloids from *Zanthoxylum* sp. *Phytochemistry*.

Shamir, E., T.L. Thompson, **M.M. Karpiscak**, R.J. Freitas and J. Zauderer. 1999. Nitrogen accumulation in a constructed wetland for dairy wastewater treatment. *Journal of the American Water Resources Association* (Submitted).

Waechter, G.A., G. Maatooq, **J.J. Hoffmann**, W.M. Maiese, M.P. Singh, G. Montenegro, and B.N. Timmermann. 1999. Antibacterial diterpenoid acids from *Azorella compacta*. *J. Nat. Prod.* 62(9): 1319-1321.

Waechter, G.A., **J.J. Hoffmann**, T. Furbacher, M.E. Blake and B.N. Timmermann. 1999. Antibacterial and antifungal flavanones from *Eysenhardtia texana*. *Phytochemistry* (Accepted).

Weiss, E., **S.E. Marsh** and E. Pfirman. In press. Application of NOAA-AVHRR time-series NDVI data to assess changes in Saudi Arabia's rangelands. *International Journal of Remote*

Other Journal Publications, Pamphlets, Reviews, and Abstracts

Coates, W.E. 1999. There could be a good egg in your future. Senior Edition, *The Journal of Healthful Aging*, 12(1):2.

Hutchinson, B. 1999. Conducting a library evaluation in Tamil Nadu. *Information Outlook*, 3(6):14.

Hutchinson, B., J. Pfander and M. Haseltine. Rangeland management information on the Web. Arizona's Ranchers Guide. Tucson, Arizona: Cooperative Extension (Accepted).

Hutchinson, C.F. 1999. Vulnerability analysis and FEWS. Famine Early Warning System, US Agency for International Development. Washington.
<http://www.info.usaid.gov/fews/va/cvaguide/cvachapter1.pdf>

Karpiscak, M.M. 1999. *Mosquitoes in the desert*. Catalina Foothills Estates--Number 7 Association Newsletter. November. pp. 2-4.

Karpiscak, M.M., R.D. Wass, R.J. Freitas and S.B. Hopf. 1999. Constructed wetlands in Southern Arizona. *Arid Lands Newsletter* #45, Spring/Summer. 12 pp.
<http://ag.arizona.edu/OALS/ALN/aln45/wetlands.html>

Books, Book Chapters, and Conference Proceedings

- Gunatilaka, A.A.L.** 1999. Alkaloids of Sri Lankan flora. In G.A. Cordell (ed.), *The alkaloids*. Vol. 52. San Diego: Academic Press. pp. 1- 101.
- Hutchinson, C.F.** 1999. *Commentary*. R. Lal, H.M. Hassan, and J. Dumanski, "Desertification control to sequester C and mitigate the greenhouse effect." In N.J. Rosenberg, R.C. Izaurralde, and E. L. Malone (eds.). *Carbon sequestration in soils: Science, monitoring, and beyond*. Richmond: Battelle Press. pp. 141-142.
- Hutchinson, C.F.** and E. Weiss. 1999. Remote sensing contribution to an early warning system for genetic erosion of industrial crops. *Proceedings of the Technical Meeting on the FAO World Information and Early Warning System on Plant Genetic Resources. Food and Agriculture Organization of the United Nations*. Research Institute of Crop Production. Prague. pp. 19-25 (Invited).
- McLaughlin, S.P.** In press. Exotic species in the western United States: Putting the Sonoran Floristic Province into perspective. In B. Tellman (ed.), *Exotic species in the Sonoran Desert*.
- McLaughlin, S.P.**, and J.E. Bowers. 1999. Diversity and affinities of the flora of the Sonoran Floristic Province. In: R.H. Robichaux (ed.), *Ecology of the Sonoran Desert plants and plant communities*. Tucson: The University of Arizona Press.
- Nokes, R.L., C.P. Gerba, and **M.M. Karpisak**. 1999. Reduction of enteric organisms in small-scale, subsurface flow constructed wetlands. In: *Proceedings from Battelle Wetland Conference*. Salt Lake City, Utah.

Reports

Coates, W.E. Measuring PM10 dust in cotton. 1999. College of Agriculture, Agricultural Experiment Station Research Report, 1998.

Hutchinson, B. 1999. *Evaluation of TANUVAS library system and plans for improved operations and services*. Madras/Chennai, India: Tamil Nadu Veterinary and Animal Sciences University, March 1999. 31 pp. + attachments.

Karpiscak, M.M., S.B. Hopf, and K.E. Foster. 1999. Pima County Constructed Ecosystems Research Facility Annual Progress Report VIII-1997. Submitted to Pima County Wastewater Management Department, Contract No. 01-03-U-110343-0888.

Maingi, J.K., **S.E. Marsh** and W.G. Kepner. 1999. Accuracy assessment of 1992 Landsat-MSS derived land cover for the Upper San Pedro Watershed (U.S./Mexico). Online publication: United States Environmental Protection Agency, Environmental Sciences Division. A landscape approach for detecting and evaluating change in a semi-arid environment.

<http://www.epa.gov/crdlvweb/land-sci/accuracy.htm>

PDF version may be accessed at <http://www.epa.gov/crdlvweb/pdf/353leb99.pdf>

Marsh, S.E., C.S.A. Wallace, and J. Walker. 1999. Evaluation of satellite remote sensing methods for regional inventory and mapping of desert resources: Final report. The University of Arizona for the U.S. National Park Service Cooperative Agreement CA8000-2-9001.

McClaran, M.P., D.M. Meko, **S.E. Marsh,** S.E. Drake, and S.M. Skirvin. 1999. Evaluation of the effects of global climate change on the San Pedro Watershed: Final report. The University of Arizona for the U.S.G.S. Biological Resource Division Cooperative Agreement A950-A1-0012.

Edited Volumes and Newsletters

Waser, K. 1999. *Arid Lands Newsletter*, Volumes 45, 46.

Presentations, Talks, and Posters

Brochini, C., L.M. Canfield and **A.A.L. Gunatilaka**. 1999. Beta-carotene oxidation products with anticancer activity. *Arizona Cancer Center 7th Annual Science Fair*.

Coates, W.E. and J.A. Hilbert. 1999. Liquid and solid ballast on FWD tractors. ASAE International Meeting. Toronto, Canada. July 18-21.

Coates, W.E., R. Ayerza and D. Ravetta. 1999. Guayule rubber and latex content: Variation with time. Diversity in Agricultural Products: New Crops & New Markets meeting. Eugene, Oregon. October 17-21.

Furbacher, T.R., L. Rafferty, **J.J. Hoffmann, S. McLaughlin,** and **A.A.L. Gunatilaka**. 1999. Investigation of southwestern plants for DNA cleavage agents. *Arizona Cancer Center 7th Annual Science Fair*.

Gunatilaka, A.A.L. Presented chemistry and biology of some natural product-based anticancer agents. University of Hawaii, Hilo.

Gunatilaka, A.A.L. Presented natural product-based anticancer agents. University of Malaysia, Kuala Lumpur.

Gunatilaka, A.A.L. Presented novel strategies for natural product-based drug discovery. Instituto de Quimica, UNESP, Araraquara, Brazil.

Gunatilaka, A.A.L. Presented studies on natural product-based anticancer agents. Universidade Nova de Lisboa, Lisbon.

Gunatilaka, A.A.L. Presented studies on natural product-based anticancer agents including Taxol. Institute of Biology, Dalat, Vietnam.

Hay, R.A. and **S.E. Marsh**. 1999. Validation of thematic mapper imagery using airborne video. Association of American Geographers 95th Annual Meeting. 23-27 March, Honolulu, Hawaii.

Hoffmann, J.J. 1999. Invited presentation at 9th Annual Drug Discovery Symposium, Conservation and utilization of the Desert Southwest for antitumor leads. Sept 23-24.

Hutchinson, B. 1999. Developing information products for an international biodiversity project. Presented at the Arizona State Library Association Annual Conference. Phoenix, Arizona, November 18. (Selected Paper).

Hutchinson, B. 1999. Improved management of public land grazing allotments: An information resource. Presented at the IALC Land Management Workshop. Reno, Nevada, November 4-5.

Hutchinson, B. 1999. Information dissemination products for the Bioactive Agents of Dryland Biodiversity Project. Presented at the Sixth Annual ICBG Meeting. Tucson, Arizona, May 19.

Hutchinson, B. 1999. USAIN updates. Presented as President of USAIN at the Special Libraries Annual Conference (Minneapolis, Minnesota, June 9) and at the American Library Association Annual Conference (New Orleans, Louisiana, June 25).

Hutchinson, B. and A. Hedrich. 1999. Cattle, corn, and chile peppers: Searching for agricultural information on AgNIC. Presented at the USAIN Conference. Manhattan, Kansas, April 24.

Hutchinson, B. and **C. Casler.** 1999. Changing Arizona agriculture: Role of information technology (data and libraries). Presented to representatives from the Arizona Farm Bureau. Tucson, Arizona, September 28.

Hutchinson, B. and G. Ruyle. 1999. Using the Web: What's out there. Presented at The Art and Science of Range Management in the Year 2000: A Professional Range Managers Update. St. George, Utah, March 12-13.

Hutchinson, B. and J. Pfander. 1999. Arizona AgNIC examples of collaboration. Presented at the USAIN Conference. Manhattan, Kansas, April 23.

Hutchinson, B. and J. Pfander. 1999. Using the Web to find information on Arizona rangelands. V Bar V Field Day. College of Agriculture, University of Arizona, August 28. (poster session)

Hutchinson, B., K. Russell, and J. McCue. 1999. Designing a distributed information system: The Agriculture Network Information Center (AgNIC) model. Presented at the Special Libraries Association Annual Conference. Minneapolis, Minnesota, June 8.

Hutchinson, C.F. 1999. Bridging the gap between remote sensing research and user communities: The role of universities. National Remote Sensing Applications Conference and Workshop. Auburn University, November 15-17 (Invited).

Karpiscak, M.M. 1999. Effluent and water harvesting for irrigation in agroforestry production. Presented at IALC's Land Management Workshop: A Tenth Anniversary Celebration of USFS, CSREES, Israeli and IALC Partnerships. Reno, Nevada. November 4-5.

Kunzmann, M.R., R.J. Hobbs, C.S.A. Wallace, and **S.E. Marsh.** 1999. AVHRR imagery analysis and habitat modeling as planning tools for conducting yellow-billed cuckoo surveys in Arizona. 1999 ESRI International User Conference. 26-30 July, San Diego, California. Online Publication: ESRI User Conference Proceedings Archive. October 26. <http://www.esri.com/library/userconf/proc99/proceed/papers/pap361/p361.htm>

Oswald, A.M., C.P. Gerba and **M.M. Karpiscak.** 1999. Removal of enteric and pathogenic organisms from wastewater by artificial wetlands. Presented at the 9th Biennial Symposium on the Artificial Recharge of Groundwater. Tempe, Arizona, June 10-12. 10 pp.

Quanrud, D., R. Arnold and **M.M. Karpiscak.** 1999. Characterization of organics in wetland and soil-aquifer treatment systems. Presented at the 9th Biennial Symposium on the Artificial Recharge of Groundwater. Tempe, Arizona, June 10-12. 10 pp.

Shamir, E., **M.M Karpiscak** and R.J. Freitas. 1999. Subsurface monitoring of livestock derived nitrogen beneath a constructed wetland in the arid southwest. Presented at the 3rd National Workshop on Constructed Wetlands/BMPs for Nutrient Reduction and Coastal Water Protection, New Orleans, Louisiana, June 9-12.

Web Pages
Designed and Maintained by the Arid Lands Information Center

---- Arizona AgNIC Rangeland Management:

<http://ag.arizona.edu/agnic/range.html>, including special sections on NEPA, Clean Water Act, and NRCS Range Site Guides.

---- 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>.

---- Improved Management of Public Land Grazing Allotments: An information resource.

<http://ag.arizona.edu/vbarv/index.html>.

---- International Arid Lands Consortium:

<http://ialcworld.org>

---- 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>.

---- Soils of Arid Regions of the United States and Israel.

<http://ag.arizona.edu/OALS/IALC/Soils/home.html>

---- U.S. Agricultural Information Network:

<http://usain.org>

---- University Development Linkages Project:

<http://ag.arizona.edu/OALS/oals/proj/linkages/chillink.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. 1998. A device to extract juice and gel from aloe vera leaves. Patent disclosure submitted; no action at this time.

Coates, W.E. and M. Siemens. 1998. Machine for separating bindings and covers from recyclable paper items. Patent applied for by U of A.

Hoffmann, J. J. and G. Waechter. 1999. Antibacterial and antifungal flavanones from *Eysenhardtia texana*. Patent pending, December, full patent.

Hoffmann, J. J., J. Guttermann, C. J. Arntzen and M.B. Tracey. 1999. Triterpene compositions and methods for use thereof. Patent pending, May, full patent.

Hoffmann, J.J. 1999. Antifeedants and insecticides from guayule, UA Case 1552. Provisional patent filed, December.

Hoffmann, J.J. 1999. Partheniol, a non-toxic control of aphids. Provisional patent filed, December.