

Darbaker Prize Committee Report 2007

The committee was composed of Wayne Fagerberg, Linda Graham and Martha Cook (chair).

The solicitation for nominations was sent out electronically to members of the BSA and to the Phycological Society of America. It was also posted on the BSA and PSA websites and put in the Plant Science Bulletin and the PSA Newsletter. Three nominations were received. The committee unanimously agreed that JoAnn Burkholder was the most outstanding nominee based on the criterion of meritorious work in the study of microalgae during the last 2 calendar years (2005-2006), published in English. Burkholder is at the Center for Applied Aquatic Phycology, North Carolina State University, Raleigh North Carolina. (<http://www.cals.ncsu.edu/plantbiology/Faculty/jburkholder/jburkholder.html>)

Dr. Burkholder is recognized for the breadth of her many important contributions toward understanding harmful dinoflagellates, including the environmental factors affecting these algae, their effects on other organisms, and interspecific differences among the algae.

The nominated papers from the previous two years are cited below:

Burkholder, J.M., A.S. Gordon, P.D. Moeller, J.M. Law, K.J. Coyne, A.J. Lewitus, J.S. Ramsdell, H.G. Marshall, N.J. Deamer, S.C. Cary, J.W. Kempton, S.L. Morton and P.A. Rublee (2005) Demonstration of toxicity to fish and to mammalian cells by *Pfiesteria* species: Comparison of assay methods and multiple strains. *Proceedings of the National Academy of Sciences (U.S.A)* 102:3471-3476.

Glibert, P.M., S. Seitzinger, C.A. Heil, J.M. Burkholder, M.W. Parrow, L.A. Codispoti and V. Kelly (2005) Eutrophication – new perspectives on its role in the global proliferation of harmful algal blooms. *Oceanography* 18:198-209.

Parrow, M.W., J.M. Burkholder, N.J. Deamer and J.S. Ramsdell (2005) Contaminant-free cultivation of *Pfiesteria shumwayae* (Dinophyceae) on a fish cell line. *Aquatic Microbial Ecology* 39:97-105.

Springer, J.J., J.M. Burkholder, P.M. Glibert and R.E. Reed (2005) Use of a real-time remote monitoring network and shipborne sampling to characterize a dinoflagellate bloom in the Neuse Estuary, North Carolina, U.S.A. *Harmful Algae* 4:533-551.

Burkholder, J.M., R.V. Azanza and Y. Sako (2006) The ecology of harmful dinoflagellates, pp. 53-66. In: *The Ecology of Harmful Algae*, by E. Granéli and J. Turner (eds.). Springer-Verlag, New York.

Burkholder, J.M., D.A. Dickey, C. Kinder, R.E. Reed, M.A. Mallin, G. Melia, M.R. McIver, L.B. Cahoon, C. Brownie, N. Deamer, J. Springer, H. Glasgow, D. Toms and J. Smith (2006) Comprehensive trend analysis of nutrients and related variables in a large eutrophic estuary: A decadal study of anthropogenic and climatic influences. *Limnology and Oceanography* 51:463-487.

Burkholder, J.M. and P. M. Glibert (2006) Intraspecific variability: An important consideration in forming generalizations about toxigenic algal species. *African Journal of Marine Science* 28:177-180.

Glibert, P.M. and J.M. Burkholder (2006) The complex relationships between increasing fertilization of the Earth, coastal eutrophication, and HAB proliferation, pp. 341-354. In: *The Ecology of Harmful Algae*, by E. Granéli and J. Turner (eds.). Springer-Verlag, New York.

Marshall, H.G., P.E. Hargraves, J.M. Burkholder, M.W. Parrow, M. Elbrächter, E.H. Allen, V.M. Knowlton, P.A. Rublee, W.L. Hynes, T.A. Egerton, D.L. Remington, K.B. Wyatt, A.J. Lewitus and V.C. Henrich (2006) Taxonomy of *Pfiesteria* (Dinophyceae). *Harmful Algae* 5:481-496.

Parrow, M.W., M. Elbrächter, M.K. Krause, J.M. Burkholder, N.J. Deamer, N. Hyte and E.H. Allen (2006) The taxonomy and growth of a *Cryptothecodinium* species (Dinophyceae) isolated from a brackish water fish aquarium. *African Journal of Marine Science* 28:185-191.

Shumway, S.E., J.M. Burkholder and J. Springer (2006) Effects of the estuarine dinoflagellate *Pfiesteria shumwayae* (Dinophyceae) on survival and grazing activity of several shellfish species. *Harmful Algae* 5:442-458.

Skelton, H.M., M.W. Parrow and J.M. Burkholder (2006) Phosphatase activity in the heterotrophic dinoflagellate, *Pfiesteria shumwayae* (Dinophyceae). *Harmful Algae* 5:395-406.

Glibert, P.M., J.M. Burkholder, M.W. Parrow, A.J. Lewitus and D.E. Gustafson (2006) Direct uptake of nitrogen by *Pfiesteria piscicida* and *Pfiesteria shumwayae*, and nitrogen nutritional preferences. *Harmful Algae* (special issue on the ecology of *Pfiesteria*) 5:380-394.

Lewitus, A.J., M.S. Wetz, B.M. Willis, J.M. Burkholder, M.W. Parrow and H.B. Glasgow (2006) Grazing activity of *Pfiesteria piscicida* (Dinophyceae) and susceptibility to ciliate predation vary with toxicity status. *Harmful Algae* 5:427-434.

Rublee, P.A., R. Nuzzi, R. Waters, E.R. Schaefer and J.M. Burkholder (2006) *Pfiesteria piscicida* and *Pfiesteria shumwayae* in coastal waters of Long Island, New York, USA. *Harmful Algae* 5:374-379.

Zimba, P.V., A. Camus, K. Gregg, E.H. Allen and J.M. Burkholder (2006) Co-occurrence of white shrimp, *Penaeus vannamei*, mortalities and microcystin toxin in a southeastern USA shrimp facility. *Aquaculture* 261:1048-1055.

Burkholder, J.M., B. Libra, P. Weyer, S. Heathcote, D. Kolpin, P.S. Thorne and M. Wichman (2006) Impacts of waste from concentrated animal feeding operations on water quality. *Environmental Health Perspective*