

Opisthobranch Newsletter

February, 1999 -- 25(1):1

Steven J. Long, editor; 20220 21st Avenue N.W., Shoreline, WA 98177-2314; 206-546-5977; 206-546-5076 fax; <http://www.seaslug.com> Back volumes available Issues@seaslug.com. Copyright © 1999.

EDITOR'S NOTES

For the present I will continue publishing the ON approximately monthly and mailing the paper copies out quarterly to paid subscribers. The monthly issues will be distributed via the seaslug listserver and in Portable Document Format.

Kerry Bruce Clark died on January 10, 1999 -- I can not imagine no longer having his support and encouragement. The day before I heard, I had received his 1999 subscription to the ON and I had talked with him several times in the past few months.



Kerry's self-portrait from his Metazoa Site

ANNOUNCEMENT

Dr. Kerry Bruce Clark, Professor of Biological Sciences at Florida Institute of Technology (Melbourne) and Fellow of the American Association for the Advancement of Science, died unexpectedly Sunday morning, 10 January 1999, of apparent heart failure. Kerry's research focused on the biology of opisthobranchs, including their physiology and ecological role in marine ecosystems. His publications, most notably on opisthobranch biodiversity, reproductive biology, systematics, and algal symbioses, found a wide variety of outlets. He was an equally active promoter of computerized tutorial techniques in biological sciences, particularly involving video imaging, 3-D modeling, and software development. "Metazoa," an award-winning CD-ROM exploration of invertebrate zoology, was his most significant brainchild. His students and colleagues will recall with fondness his eclectic sense of humor, his enthusiastic love of the variety of marine invertebrates, his junkets to Lake Surprise (Florida Keys), his favorite collecting device (the "Clark Sucker"), and his office door (AKA "Museum of Bidimensional Zoology"). A memorial service will be held at 2 pm on Saturday, 16

January, at the Florida Tech All-Faiths Center. His family asks that in lieu of flowers contributions be made to the Cystic Fibrosis Foundation (6000 Executive Blvd, Suite 309, Rockville, MD 20852). - Paula M. Mikkelsen mikkel@amnh.org

Eulogy for Dr. Kerry B. Clark

Presented by Dr. Duane E. De Freese

Director of Research, Hubbs-SeaWorld Research Institute

17 years ago today, I stepped off a plane in New York to rush to my family home.

My father died the night before of a heart attack at his retirement dinner.

At the time, and for the last 17 years, I felt that there would be no other time in my life that would be so sad, so devastating, and so unexpected. I was wrong.

Kerry was there to support me when I returned to Fl. Tech, as were many of you in the room. I feel comfortable in telling Kerry's son, David, and Kerry's family, that we are all here for you.

David, I know what you are going through. I am available at any time, for anything you might need.

I saw Kerry just a few weeks ago. He told me how proud he was of you and how much he admired your courage and the way you have faced difficult challenges.

Never forget that your father loved you as a son and as his best friend.

You have heard many things about Kerry today from many close friends and colleagues. He was a...

great scientist
exceptional teacher,
visionary researcher

man deeply committed to protecting the environment
talented artist,
computer graphics genius,

Kerry was the most intellectual person I have ever knowna true renaissance man

But Kerry wasn't perfect... He had a strange sense of what was politically and socially acceptable... It made some of us nervous sometimes, but we loved him anyway. Kerry was Kerry. To really know him you had to be there.

Kerry couldn't tell the perfect joke - but he sure kept us laughing a lot through the process.

And Kerry enjoyed a good practical joke. I still have not repaid him and an unnamed accomplice for bombarding the outhouse at Carrie Bow Cay, Belize with coconuts ...as I sat in agony with, what I thought was, a life-threatening bout of diarrhea. I knew it was Kerry. I heard his unmistakable laugh.

But more important than these intellectual (and sometimes less than intellectual) accolades, we should remember that Kerry was a caring and sensitive man. He was my mentor -- He was my friend

The Japanese have a term of respect for their teachers and masters..."Sensei". Kerry was my Sensei.

I will miss him greatly.

Opisthobranch Newsletter

Copyright © February, 1999 - Volume 25(1):2

Early in my graduate student apprenticeship with Kerry, he told me something that has stuck with me through every career decision I have made.

In science and academia there are two kinds of people. The "Mechanic", someone who achieves a level of expertise and success and then remains at a comfortable plateau, mechanically moving through each day without no deviation from standard or traditional practices. The plateau eventually becomes a rut. The hard won skills and expertise slowly erode over time. And...

The "Visionary", someone who strives for constant intellectual growth, understanding, and change. Someone who thinks outside of the box, questions the paradigms, challenges the scientific dogma, and pushes the envelope of scientific knowledge and understanding.

Kerry told me, " if you are capable of being a Visionary, do not allow insecurity, indecision or laziness to cause you to settle for being a mechanic. Kerry was a true visionary. His message and all of his teachings have served me well.

The fact that Kerry is no longer with us is a reminder that life is unpredictable, fragile and sadly ...very short.

We can honor his teachings and his life by continuing his legacy.

He left us with ideas.

He left us with projects.

He left us with inspiration

He left us with a principle to provide high quality and innovative science and education that each of us should embrace in his name.

Let's celebrate Kerry's life by living ours in a manner that he would be proud of.

IN MEMORIAM



From David R. Franz: Kerry Clark was a New Jersey boy, and a graduate of the old Zoology Department at Rutgers. Bob Loveland (Professor, R.U.) recalls that Kerry was one of the brightest lights in his experience to pass through the Rutgers Invertebrate Zoology course. We may have overlapped briefly there - he as an undergraduate and I as a doctoral student in the Oyster Lab - but I don't recall meeting Kerry until he arrived in Storrs [Connecticut], probably about 1968. I was only 30 years old, he was in his early 20's - and both of us married - so that both couples soon became the very closest friends. In high school and as an undergraduate, Kerry had spent lots of time exploring the salt marsh at Cheesequake, and his first idea for doctoral research tended toward the physiology of fiddler crabs. But I was working at that time on New England nudibranchs, and he immediately was taken by the beauty of these animals.



I think that Kerry's most unique personality characteristic (besides his rather dark and pungent sense of humor, which I am afraid we shared) was his unbounded enthusiasm and optimism. He was up for any project or problem; just mention it, and it was done! (or at least tried.) While his grasp sometimes exceeded his reach, Kerry was an ideal first graduate student for any young professor. His enthusiasm rubbed off on others around him which may explain why he was asked to accompany Stubby Rankin (Prof. Zool., U. Connecticut) twice to Antarctica.



Clark photo above (Connecticut, 1969) and at left (Edinburgh, 1976) from David Franz

Opisthobranch Newsletter

Copyright © February, 1999 - Volume 25(1):3



David Franz photo of Kerry Clark, Maine, 1968

It's hard to remember what our science was like in 1969. The computer was a huge, ungainly and difficult beast available only to a few aficionados outside of the computer department and could only be fed by punch cards. Xerox machines were scarce. SCUBA technology was just coming into its own for marine biological research, and cladistic analysis was a subject being explored only in the more arcane taxonomy journals. Kerry and I both learned the basics of SCUBA and computers together. In Kerry's case, he never stopped pushing both technologies to the ultimate benefit of both zoology and education. He became a skilled diver and field collector. He invented a little device for sucking up sea slugs underwater, which he always referred to as "the Clark Sucker"¹ (a little Kerry humor there).

Most of his diving was in and around eastern Long Island Sound, much of it in the dead of winter- and he was really good at it. I may be wrong, but I suspect that the little cephalaspid *Philine sinuata* has rarely if ever been found again since Kerry collected it and we redescribed it.²

An amusing incident occurred in Oxford, England. Kerry and I had traveled together to participate in the Special Symposium on the Zoogeography of Marine Slugs in Edinburgh Scotland in 1976. We flew into London, rented a car, and started up to Scotland. One stop we made in Oxford was notable. The car ran out of petrol in an residential neighborhood. A helpful pedestrian mentioned that there was a petrol station not too far away and pointed in the general direction. Kerry "volunteered" (remember, I was the professor) to fetch the gas while I stayed with the rented car. Noticing a bicycle leaning against the front door of a house, Kerry knocked and asked the rather mystified lady inside

whether he might borrow the bike to get gas for the car. Remarkably, she agreed probably figuring it was better to humor this odd pair of Americans. Unfortunately, the petrol station was located at the confusing hub of a multitude of streets, all radiating from the center. After buying the gas, Kerry couldn't quite remember which of the identical streets feeding into the hub he had come. After what seemed like hours of biking up and down carrying a few liters of petrol, he finally found the missing car and a fuming but relieved professor. The bike was returned to its owner, who seemed not in the least perturbed, and we got on our way.

Kerry's enthusiasm didn't subside very much with age. On our infrequent get together in Florida, I remember the midnight trips to the beach to observe nesting sea turtles, adventures netting shrimp, and of course, field trips to collect sacoglossans in the Indian River. Then there were the orchids, the fruit trees etc. Although his dissatisfaction with the status quo, and his inability to "suffer fools" may have grown a bit in later years, the unbounded enthusiasm always remained just below the surface. Although personal, professional and health problems often cropped up in later years, any interesting problem in biology always would get his attention, and trump any other issues of the moment. Kerry was enormously loyal to his oldest friends and colleagues. Thirty plus years, separated by considerable distance and professional interests, did not lessen our respect and admiration for each other, and I will sorely miss Kerry. -

dfranz@brooklyn.cuny.edu

¹Clark, 1971. *Veliger* 13:364-367

²Franz & Clark, 1969. *Veliger* 12:69-71

Kerry Bruce Clark - Publications (Biological Sciences):

Clark, K.B. 1971. The construction of a collecting device for small aquatic organisms and a method for rapid weighing of small invertebrates. *Veliger* 13(4):363-367.

Clark, K.B. 1972. Life cycles of southern New England nudibranch molluscs. *Dissertation Abstracts International* 32B(7):3894.

Clark, K.B. 1975. Nudibranch life cycles in the northwest Atlantic and their relationship to the ecology of fouling communities. *Helgolander wissenschaftliche Meeresuntersuchungen* 27:28-69.

Clark, K.B. 1976. Development patterns, habitat stability, and the zoogeography of Atlantic Nudibranchia and Ascoglossa. *J. Molluscan Stud.* 42(2):298.

Clark, K.B. 1977. *Phyllaplysia smaragda*, a new anaspidean from Florida (Opisthobranchia: Dolabriferidae). *Bull. Mar. Sci.* 27:651-657.

Clark, K.B. 1982. A new *Aplysiopsis* from central Florida (Opisthobranchia: Hermaeidae) with a brief summary of the ceratiform families of Ascoglossa. *Bull. Mar. Sci.* 32:213-219.

Clark, K.B. 1982. A new *Volvatella* (Mollusca: Ascoglossa) from Bermuda, with comments on the genus. *Bull. Mar. Sci.* 32:112-120.

Clark, K.B. 1984. New records and synonymies of Bermuda opisthobranchs (Gastropoda). *Nautilus* 98(2):85-97.

Clark, K.B. 1990. Invertebrate Models. SIGGRAPH '90: Video Screening (juried competition)

Clark, K.B. 1990. METAZOA. SIGGRAPH '90: Multimedia (juried competition)

Clark, K.B. 1991-1993. METAZOA: Vanishing Kingdom. (CD-ROM, Macintosh, 330 MB). Ocellus Productions, Palm Bay, FL (Revised annually, current version 2.2; Finalist, *NewMedia Magazine* multimedia 1994)

Clark, K.B. 1992. Are Our Sea Slugs Slipping Away? Opisthobranch Molluscs as Rare Marine Invertebrates. *American Zoologist* 32(5):111A.

Clark, K.B. 1992. Plant-like Animals and Animal-like Plants: Symbiotic Coevolution of Ascoglossan (=Sacoglossan) Molluscs, Their Algal Prey, and Algal Plastids. in **W. Reisser, [Ed.]** *Algae and Symbioses*. Biopress Ltd., Bristol, U.K., pp. 515-530, 3 figs.

Clark, K.B. 1994. The Cambrian explosion: a gallery of computer art. SIGGRAPH '94, Technical Sketches

Opisthobranch Newsletter

Copyright © February, 1999 - Volume 25(1):4

- Clark, K.B. 1994. The long road to Metazoa. pp 20-23 in Multimedia Manual for the Biological Sciences, C. Johnson, ed. Benjamin Cummings, Wellesley, MA.
- Clark, K.B. 1994. Ascoglossan (=Sacoglossa) Molluscs in the Florida Keys: Rare Marine Invertebrates at Special Risk. Bull. Mar. Sci. 54(3):900-916, tbls. 1-3, fig. 1. [33 spp.]
- Clark, K.B. 1995. Ocellus Project CD-ROM (110 MB). Florida Institute of Technology, Melbourne (summary of UFEP and student workshops)
- Clark, K.B. 1995-07. Rheophilic/oligotrophic lagoonal communities: through the eyes of slugs (Mollusca: Opisthobranchia). Bull. Mar. Sci. 57(1):242-251, tbl. 1, figs. 1-3. [62 spp.]
- Clark, K.B. 1996. Living Rock in Crystal Seas. Video, 30 min, publ. by WBCC-TV, Cocoa, FL, (I coauthored script, computer graphics, and assisted in underwater taping).
- Clark, K.B. 1996. Mollusc conservation in south and central Florida: importance of life history data in development of collection policy. Tentacle 6:22-24.
- Clark, K.B. 1996. Oikos Kybernetes CD-ROM. (edited class project from my physiological ecology graduate course).
- Clark, K.B. 1996-11-01. Reader Forum: Indicator Species. Opisthobranch Newsletter 22(11):39.
- Clark, K.B. 1996-12-01. Reader Forum: *Elysia*, *Aplysiopsis* & *Oxynoe*. Introduction of Extramediterranean Species. Opisthobranch Newsletter 22(12):43.
- Clark, K.B. 1996-12-01. Reader Forum: Further on *Caulerpa*. Opisthobranch Newsletter 22(12):44.
- Clark, K.B. 1997-04-07. Feeding Behavior of *Phyllaplysia taylori*. Opisthobranch Newsl. 23(4):14. [Editor error for *P. engilli*]
- Clark, K.B. 1997-05. Range Extension vs. New Record. Opisthobranch Newsl. 23(5):17-18.
- Clark, K.B. 1997-05-03. Videocamera for Tiny Animals. Opisthobranch Newsl. 23(5):19.
- Clark, K.B.; Busacca, M. 1978. Feeding specificity and chloroplast retention in four tropical Ascoglossa, with a discussion of the extent of chloroplast symbiosis and the evolution of the order. J. Molluscan Stud. 44:272-282.
- Clark, K.B.; Busacca, M.; Stirts, H.M. 1979. Nutritional Aspects of Development of the Ascoglossan, *Elysia cauze*. In: Stancyk, S.E. (Ed.) Reproductive Ecology of Marine Invertebrates. Univ. S. Carolina Press, Columbia, S. Carolina. [*Volvatella bermudae*, *Oxynoe antillarum*, *Elysia subornata*, *Elysia papillosa*, *Elysia tuca*, *Elysia flava*, *Bosellia mimetica*, *Cyerce antilensis*, *Cyerce cristallina* n. sp.]
- Clark, K.B.; Busacca, M.; Goetzfried, A. 1975. Developmental patterns in tropical Atlantic Nudibranchia and Ascoglossa and their relation to trophic stability. American Zoologist 15(3):793.
- Clark, K.B.; DeFreese, D. 1987. Population Ecology of Caribbean Ascoglossa (Mollusca: Opisthobranchia): a Study of Specialized Algal Herbivores. Amer. Malacol. Bull. 5:259-280. [*Elysia*, *Ascobulla*, *Ercolania*, *Mourgona*, *Aplysiopsis*, *Hermaea*, *Costasiella*, *Lobiger*, *Oxynoe*, *Tridachia*, *Bosellia*, *Cyerce*, *Placida*]
- Clark, K.B.; Franz, D.R. 1969. Occurrence of the Sacoglossan Opisthobranch *Hermaea dendritica* Alder & Hancock in New England. Veliger 12(2):174-175.
- Clark, K.B.; Goetzfried, A. 1976. *Lomanotus stauberi*, a new dendronotacean nudibranch from central Florida (Mollusca: Opisthobranchia). Bull. Mar. Sci. 26(4):474-478.
- Clark, K.B.; Goetzfried, A. 1978. Zoogeographic influences on development patterns of North Atlantic Ascoglossa and Nudibranchia, with a discussion of factors affecting egg size and number. J. Molluscan Stud. 44(3):283-294.
- Clark, K.B.; Jensen, K.R. 1981. A comparison of egg size, capsule size, and development patterns in the order Ascoglossa (Sacoglossa) (Mollusca Opisthobranchia). International J. Invertebr. Reprod. 3:57-64.
- Clark, K.B.; Jensen, K.R. 1982. Effects of temperature on carbon budget partitioning in the zooxanthellal symbiosis of *Aiptasia pallida* (Verrill). Journal of Experimental Marine Biology Ecology 64:215-230.
- Clark, K.B.; Jensen, K.R.; Stirts, H.M. 1990-10. Survey for Functional Kleptoplasty Among West Atlantic Ascoglossa (=Sacoglossa) (Mollusca: Opisthobranchia). Veliger 33(4):339-345, tbls. 1-2, fig. 1. [18 spp.]
- Clark, K.B.; Jensen, K.R.; Stirts, H.M.; Fermin, C. 1981-02. Chloroplast Symbiosis in a non-Elysiid Mollusc, *Costasiella liliana* Marcus (Hermaeida: Ascoglossa (=Sacoglossa): Effects of Temperature, Light Intensity and Starvation on Carbon Fixation Rate. Biol. Bull. 160(1):43-54; figs. 1-10, tbl. 1.
- DeFreese, D.E.; Clark, K.B. 1983. Reproductive energetics of thirty-one species of Florida Opisthobranchia. International Journal of Invertebrate Reproduction 6:1-10.
- DeFreese, D.E.; Clark, K.B. 1991. Transepidermal uptake of dissolved free amino acids from seawater by three ascoglossan opisthobranchs. Journal of Molluscan Studies 57:65-74.
- Franz, D.R.; Clark, K.B. 1969. Occurrence of the cephalaspid *Philine sinuata* (Stimson) in southern New England, with a discussion of the species. Veliger 12:69-71.
- Franz, D.R.; Clark, K.B. 1972. A discussion of the systematics, reproductive biology, and zoogeography of *Polycerella emertonii* and related species (Gastropoda: Opisthobranchia). Veliger 14:265-270.
- Gilbert, S.; Clark, K.B. 1981. Seasonal variation of macrophyte standing stock in the northern Indian River, Florida. Estuaries 4:223-225.
- Jensen, K.R.; Clark, K.B. 1983. New rerords and habitat descriptions of Florida Ascoglossa (Mollusca: Opisthobranchia). The Nautilus 97:1-13.
- Jensen, K.R.; Clark, K.B. 1986. Gastropod mollusks. In (W. Sterrer, ed.) Marine Flora and Fauna of Bermuda. Wiley. pp. 397-458.
- Kensley, B.; Clark, K.B. 1998. A new isopod species from Key Largo, Florida (Crustacea: Isopoda: Holognathidae). Proceedings of the Biological Society of Washington 111:314-319. Publications In Computer Graphics/Multimedia:
- Rankin, J.S.; Clark, K.B.; Biernbaum, C.W. 1969. Weddell Sea benthic studies. Antarctic J. U.S. 4:97.
- Rankin, J.S.; Clark, K.B.; Found, B.W. 1968. Zonation of the Weddell Sea benthos. Antarctic J. U.S. 3:85-86.
- Stirts, H.M.; Clark, K.B. 1980. Effects of temperature on the products of chloroplast symbiosis in the ascoglossan *Elysia tuca* Marcus. Journal of Experimental Marine Biology and Ecology 43:39-47.
- Swain, H.M.; Breininger, D.R.; Busby, D.S.; Clark, K.B.; Cook, S.B.; Day, R.A.; DeFreese, D.E.; Gilmore, R.G.; Hart, A.W.; Hinkle, C.R.; McArdle, D.A.; Mikkelsen, P.M.; Nelson, W.G.; Zahorcak, A.J. 1995. Indian River Lagoon Biodiversity Conference: Introduction. Bulletin of Marine Science 57:1-7
- Waugh, G.; Clark, K.B. 1986. Seasonal and geographic variation in chlorophyll levels of *Elysia tuca* Marcus. Marine Biology 92:483-487.
- Weaver, S.; Clark, K.B. 1981. Light intensity and color preferences of five ascoglossan (=sacoglossan) molluscs (Gastropoda: Opisthobranchia): a comparison of chloroplast symbiotic and aposymbiotic species. Marine Behavior and Physiology 7:297-306.



The "Clark Sucker" from Kerry's website.