Obituary: Dr. John J. McDermott (1927–2017)

Jason D. Williams

Department of Biology, Hofstra University, Hempstead, New York 11549, U.S.A.; Email: biojdw@hofstra.edu

John J. McDermott was born in Newark, New Jersey on 31 May 1927 and passed away in Lancaster, Pennsylvania on 4 October 2017. John served in the U.S. Navy during World War II, during which he was a Torpedoman's Mate Third Class on the destroyers USS Pritchett and Bradford. After the war, John attended Seton Hall College in New Jersey, where he was a member of the basketball team and graduated with a BS in Biology in 1949. John then went on to complete his MS (1951) and PhD (1954) degrees in Biology from Rutgers University, both under the direction of the parasitologist Leslie Stauber (Trager 1972). For his MS thesis. John studied trematodes of the eastern mudsnail, providing detailed morphological descriptions that are still in use today. For his PhD work, John shifted to research on a coccidian parasite of chickens but he never lost sight of the sea. After completion of his doctoral work, John held a position as an Assistant Research Specialist in Oyster Investigations at the Rutgers University Oyster Research Laboratory in Bivalve, New Jersey (now the Haskin Shellfish Research Laboratory). There he expanded his knowledge of marine organisms in the Delaware Bay and surrounding estuarine waters.

In 1958, John joined the faculty of the Biology Department at Franklin and Marshall College, quickly secured tenure, and served as chair from 1962 to 1973. During his time at Franklin and Marshall College, John inspired many students interested in invertebrate zoology. His

research focused largely on species from the east coast of the United States. including studies at the Virginia Institute of Marine Science (where he served as a Visiting Professor of Marine Science, teaching a summer Marine Invertebrates course from 1968-1974), University of Miami Marine Lab, and the Duke Marine Lab. However, John also completed research in Bermuda, Denmark, South Africa, and Wales (supported through a Fulbright Scholar Award and National Science Foundation grants). He greatly enjoyed this travel and having the opportunity to interact with colleagues from around the world.

In the vein of classic zoologists with wide interests and knowledge, John had a love for all things invertebrate, and an infectious enthusiasm for expanding our understanding of the biology and ecology of a wide range of marine taxa (Fig. 1). His important contributions across multiple groups (mostly crustaceans, nemerteans, and trematodes but also including mollusks) are impressive and explain why he was sought out by many researchers for information and advice. John was a Charter Member of The Crustacean Society and had been a patron of the society for many years. In addition, he was an Honorary Member of the Atlantic Estuarine Research Society and was awarded the society's "Venerable Clam" award. John was also active in the Society of Integrative and Comparative Biology (Division of Invertebrate Zoology) and the American Littoral Society.

His research on crustaceans included providing the first report, in collaboration

DOI: 10.2988/17-00028



Fig. 1. Dr. John J. McDermott, ca. 1995 holding a specimen of *Hemigrapsus sanguineus*. Photo courtesy of Franklin and Marshall Magazine (Winter 1995 issue).

with noted carcinologist Austin B. Williams, of the introduced Asian shore crab Hemigrapsus sanguineus (De Haan, 1835) on the east coast of the United States (Williams & McDermott 1990). This paper was based on specimens found by one of his observant students during a field trip in New Jersey. Subsequently, John documented the rapid spread of the crab (McDermott 1991, 1998a, 2000), its reproduction (McDermott 1998b), feeding (McDermott 1999), and symbionts (McDermott 2007, 2011); thus, providing the foundation for future work on the impacts of this ecologically important invasive species.

Outside of crustacean research, John was an expert on the feeding biology of nemertean worms, this work included studies detailing the natural history of a new carcinonemertid worm from pinnotherid crabs (McDermott & Gibson 1993). His impact as a nemertean researcher was acknowledged in a volume dedicated to his work (Okazaki & Turbeville 2006), whose Preface reads "This volume is dedicated to

Professor John J. McDermott whose nearly 50 years of research in different areas of marine biology, which have included ground-breaking studies of nemertean feeding behavior and ecology, inspired many others to pursue the mysteries of nemertinology." Humble in his achievements, John wrote to me at the time and indicated that he thought his "colleagues went a little overboard with the "ground-breaking" aspect."

I was fortunate to come into John's lab during the time he was intensively studying H. sanguineus. Perhaps most memorable and inspiring were our field trips to the Jersey shore during Marine Biology class, where John seemed to leave no stone unturned in his efforts to study the crab and its competitors. At this point in time John was approaching retirement but you would not have known it from his stamina in the field and his zeal in marking up our papers! At the end of the course I was thankful that he suggested working in his lab on the poorly known polychaete worm symbiont of hermit crabs, Dipolydora commensalis (Andrews, 1991). We went on to publish this research (Williams & McDermott 1997) and after his retirement in 1996 continued to collaborate, eventually reviewing all known hermit crab symbionts worldwide (Williams & McDermott 2004, McDermott et al. 2010), based largely on his knowledge of the literature and extensive personal observations.

During retirement John remained active in research and publication, continuing to complete studies on crustaceans and nemertean crabs (Fig. 2). At the time of his death, John was working on a new species of entoniscid parasite of pinnotherid crabs and tracking the potential northward expansion of the ghost crab Ocypode quadrata (Fabricius, 1787) with the help of colleagues and their field observations, for which he was very thankful. John was always a supportive colleague and friend, providing insightful feedback and serving as a role model in

VOLUME 131



Fig. 2. John collecting isopods from the surf in New Jersey in 2000. He continued field work well after retirement but wrote "In early 2007 while searching for Asian shore crabs that had invaded the Atlantic east coast in the 1980's, I had a revelation (nothing spiritual). On my knees among rocks and thick mud on the Jersey shore I had completed my collection of crabs. Ready to leave, I had difficulty standing and thought that I would have to crawl to shore or wait for the incoming tide to float me out! But not so. I said to myself, "John, you can't jump around on the intertidal rocks anymore." Thus, fieldwork came to an end and writing and laboratory research continued."

academic pursuits and life. He exemplified a teacher-scholar who found the proper balance of work and family, being a loving husband to his wife Jeanne and devoted father and grandfather to a family who all shared in his marine experiences. His was a life well-lived.

Acknowledgments

Thanks to the following for their help in assembling details and providing feedback: Drs. Joseph Thompson (Franklin and Marshall College) and Christopher B. Boyko (American Museum of Natural History). Chris Karlesky (Franklin and Marshall Magazine) kindly tracked down and scanned the head shot image of John.

Literature Cited

- McDermott, J. J. 1991. A breeding population of the western Pacific crab *Hemigrapsus sanguineus* (Crustacea: Decapoda: Grapsidae) established on the Atlantic coast of North America. Biological Bulletin 181: 195–198.
- McDermott, J. J. 1998a. The western Pacific brachyuran (*Hemigrapsus sanguineus*: Grapsidae), in its new habitat along the Atlantic coast of the United States: geographic distribution and ecology. ICES Journal of Marine Science 55: 289–298.
- McDermott, J. J. 1998b. The western Pacific brachyuran *Hemigrapsus sanguineus* (Grapsidae) in its new habitat along the Atlantic coast of the United States: reproduction. Journal of Crustacean Biology 18: 308–316.
- McDermott, J. J. 1999. The western Pacific brachyuran Hemigrapsus sanguineus (Grapsidae) in its new habitat along the Atlantic coast of the United States: feeding, cheliped morphology and growth. Pp. 425–444 in F. R. Schram & J. C. von Vaupel Klein, eds., Crustaceans and the Biodiversity Crisis, Brill, Leiden, The Netherlands, 1022 pp.
- McDermott, J. J. 2000. Natural history and biology of the Asian shore crab *Hemigrapsus sanguineus* in the western Atlantic: a review, with new information. Pp. 193–199 *in* J. Pederson, ed., Marine Bioinvasions: Proceedings of the First National Conference, MIT Sea Grant Program, Cambridge, Massachusetts, 427 pp.
- McDermott, J. J. 2007. Ectosymbionts of the nonindigenous Asian shore crab, *Hemigrapus* sanguineus (Decapoda: Varunidae), in the western north Atlantic, and a search for its parasites. Journal of Natural History 41: 2379–2396.
- McDermott, J. J. 2011. Parasites of shore crabs in the genus *Hemigrapsus* (Decapoda: Brachyura: Varunidae) and their status in crabs geographically displaced: a review. Journal of Natural History 45: 2419–2441.
- McDermott, J. J., & R. Gibson. 1993. Carcinone-mertes pinnotheridophila sp. nov. (Nemertea, Enopla, Carcinonemertidae) from the branchial chambers of Pinnixa chaetopterana (Crustacea, Decapoda, Pinnotheridae): description, incidence and biological relationships with the host. Hydrobiologia 266: 57–80.
- McDermott, J. J., J. D. Williams, & C. B. Boyko. 2010. The unwanted guests of hermits: A global review of the diversity and natural history of hermit crab parasites. Journal of Experimental Marine Biology and Ecology 394: 2–44.
- Okazaki, R. K., & J. M. Turbeville. 2006. Preface. Journal of Natural History 40: 867–871.

- Trager, W. 1972. Leslie A. Stauber: A personal appreciation. Experimental Parasitology 32: 1–10
- Williams, A.B., & J. J. McDermott. 1990. An eastern United States record for the western Indo-Pacific crab *Hemigrapsus sanguineus* (Crustacea: Decapoda: Grapsidae). Proceedings of the Biological Society of Washington 103: 108–109.
- Williams, J. D., & J. J. McDermott. 1997. Feeding behavior of *Dipolydora commensalis* (Polychaeta: Spionidae): particle capture, transport, and selection. Invertebrate Biology 116: 115–123.
- Williams, J. D., & J. J. McDermott. 2004. Hermit crab biocoenoses: a worldwide review of the diversity and natural history of hermit crab associates. Journal of Experimental Marine Biology and Ecology 305: 1–128.

Publications of John J. McDermott

- Christensen, A. M., & J. J. McDermott. 1958. Life history and biology of the oyster crab, *Pinnotheres ostreum*. Biological Bulletin 114: 146–179
- McDermott, J. J. 1960. The predation of oysters and barnacles by crabs of the family Xanthidae. Proceedings of the Pennsylvania Academy of Science 35: 199–211.
- McDermott, J. J., & S. S. Feman. 1962. A case of unilateral female reproductive organs in Ascaris lumbricoides. Journal of Parasitology 48: 506
- McDermott, J. J. 1962. The occurrence of *Pinnixia* cylindrica (Crustacea, Pinnotheridae) in the tubes of the lugworm, *Arenicola cristata*. Proceedings of the Pennsylvania Academy of Science 36: 53–57.
- McDermott, J. J. 1964. Food habits of the toadfish, *Opsanus tau* (L.), in New Jersey waters. Proceedings of the Pennsylvania Academy of Science 38: 64–71.
- Stambaugh, J. E., & J. J. McDermott. 1969. The effects of trematode larvae on the locomotion of naturally infected *Nassarius obsoletus* (Gastropoda). Proceedings of the Pennsylvania Academy of Science 43: 226–231.
- Biggs, D. C., & J. J. McDermott. 1973. Variation in temperature-salinity tolerance between two estuarine populations of *Pagurus longicarpus* Say (Crustacea: Anomura). Biological Bulletin 145: 91–102.
- McDermott, J. J. 1976. Observations on the food and feeding behavior of estuarine nemertean

- worms belonging to the order Hoplonemertea. Biological Bulletin 150: 57–68.
- McDermott, J. J. 1976. Predation of the razor clam Ensis directus by the nemertean worm Cerebratulus lacteus. Chesapeake Science 17: 299– 301
- Lytwyn, M. W., & J. J. McDermott. 1976. Incidence, reproduction and feeding of *Stylochus zebra*, a polyclad turbellarian symbiont of hermit crabs. Marine Biology 38: 365–372.
- Markham, J. C., & J. J. McDermott. 1980. A tabulation of the Crustacea Decapoda of Bermuda. Proceedings of the Biological Society of Washington 93: 1266–1276.
- McDermott, J. J. 1981. On the reproduction of *Epitonium rupicola* Kurtz (Gastropoda: Epitoniidae). Veliger 24: 67–71, + 1 plate.
- McDermott, J. J. 1981. Biology of the symbiotic crab *Pinnixa cylindrica* (Say) (Decapoda, Pinnotheridae). Proceedings of the Pennsylvania Academy of Science, 55: 23–27.
- McDermott, J. J., P. L. Zubkoff, & A. L. Lin. 1982. The occurrence of the anemone *Peachia parasitica* as a symbiont in the scyphozoan *Cyanea capillata* in the lower Chesapeake Bay. Estuaries 5: 319–321.
- McDermott, J. J. 1983. Food web in the surf zone of an exposed sandy beach along the mid-Atlantic coast of the United States. Pp. 529–538 in A. McLachlan & T. Erasmus, eds., Sandy Beaches as Ecosystems. Springer, Netherlands, 757 pp.
- McDermott, J. J. 1984. The feeding biology of *Nipponnemertes pulcher* (Johnston) (Hoplonemertea), with some ecological implications. Ophelia 23: 1–21.
- McDermott, J. J., & P. Roe. 1985. Food, feeding behavior and feeding ecology of nemerteans. American Zoologist 25: 113–125.
- Chace, F. A., Jr., J. J. McDermott, P. A. McLaughlin, & R. B. Manning. 1986. Order Decapoda (shrimps, lobsters and crabs). Pp. 312–358 in W. E. Sterrer, ed., Marine Fauna and Flora of Bermuda. John Wiley and Sons, New York, 742 pp.
- McDermott, J. J. 1987. The distribution and food habits of *Nephtys bucera* Ehlers, 1868, (Polychaeta: Nephtyidae) in the surf zone of a sandy beach. Proceedings of the Biological Society of Washington 100: 21–27.
- McDermott, J. J. 1987. Laboratory observations on the feeding biology of nemerteans from northwest Wales. Proceedings of the Pennsylvania Academy of Science 61: 38–40.
- McDermott, J. J. 1988. The role of hoplonemerteans in the ecology of seagrass communities. Hydrobiologia 156: 1–11.

VOLUME 131 5

McDermott, J. J., & R. L. Snyder. 1988. Food and feeding behavior of the hoplonemertean *Oerstedia dorsalis*. Hydrobiologia 156: 47–51.

- Williams, A.B., & J. J. McDermott. 1990. An eastern United States record for the western Indo-Pacific crab *Hemigrapsus sanguineus* (Crustacea: Decapoda: Grapsidae). Proceedings of the Biological Society of Washington 103: 108–109.
- McDermott, J. J. 1991. Incidence and host-parasite relationship of *Leidya bimini* (Crustacea, Isopoda, Bopyridae) in the brachyuran crab *Pachygrapsus transversus* from Bermuda. Ophelia 33: 71–95.
- McDermott, J. J. 1991. A breeding population of the western Pacific crab *Hemigrapsus sanguineus* (Crustacea: Decapoda: Grapsidae) established on the Atlantic coast of North America. Biological Bulletin 181: 195–198.
- McDermott, J. J. 1993. Nemertea inhabiting the *Haploops* (Amphipoda) community of the northern Øresund with special reference to the biology of *Nipponnemeretes pulcher* (Hoplonemertea). Hydrobiologia 266: 15–28.
- McDermott, J. J., & R. Gibson. 1993. Carcinonemertes pinnotheridophila sp. nov. (Nemertea, Enopla, Carcinonemertidae) from the branchial chambers of Pinnixa chaetopterana (Crustacea, Decapoda, Pinnotheridae): description, incidence and biological relationships with the host. Hydrobiologia 266: 57–80.
- Williams, J. D., & J. J. McDermott. 1997. Feeding behavior of *Dipolydora commensalis* (Polychaeta: Spionidae): particle capture, transport, and selection. Invertebrate Biology, 116: 115–123.
- McDermott, J. J. 1998. Biology of a hoplonemertean from the branchial chambers of the pinnotherid crab *Zaops (Pinnotheres) ostreum*. Hydrobiologia 365: 223–231.
- McDermott, J. J. 1998 Observations on feeding in a South African suctorial hoplonemertean, *Nipponnemertes* sp. (Family Cratenemertidae). Hydrobiologia 365: 251–256.
- McDermott, J. J. 1998. The western Pacific brachyuran (*Hemigrapsus sanguineus*: Grapsidae), in its new habitat along the Atlantic coast of the United States: geographic distribution and ecology. ICES Journal of Marine Science 55: 289–298.
- McDermott, J. J. 1998. The western Pacific brachyuran *Hemigrapsus sanguineus* (Grapsidae) in its new habitat along the Atlantic coast of the United States: reproduction. Journal of Crustacean Biology 18: 308–316.
- McDermott, J. J. 1998. Prevalence of two epicaridean isopods (Bopyridae and Entoniscidae) associated with the hermit crab *Pagurus longicarpus* Say, 1817 (Anomura) from the New

- Jersey coast (U.S.A.). Journal of Parasitology 84: 1042–1045.
- McDermott, J. J. 1999. Reproduction in the hermit crab *Pagurus longicarpus* (Decapoda: Anomura) from the coast of New Jersey. Journal of Crustacean Biology 19: 612–621.
- McDermott, J. J. 1999. The western Pacific brachyuran *Hemigrapsus sanguineus* (Grapsidae) in its new habitat along the Atlantic coast of the United States: feeding, cheliped morphology and growth. Pp. 425–444 *in* F. R. Schram & J. C. von Vaupel Klein, eds., Crustaceans and the Biodiversity Crisis, Brill, Leiden, The Netherlands, 1022 pp.
- McDermott, J. J. 2000. Natural history and biology of the Asian shore crab *Hemigrapsus sanguineus* in the western Atlantic: a review, with new information. Pp. 193–199 *in* J. Pederson, ed., Marine Bioinvasions: Proceedings of the First National Conference, MIT Sea Grant Program, Cambridge, Massachusetts, 427 pp.
- Whitman, K. L., J. J. McDermott, & M. S. Oehrlein. 2001. Laboratory studies on suspension feeding in the hermit crab *Pagurus longicarpus* Say, 1817 (Decapoda: Anomura: Paguridae). Journal of Crustacean Biology 21: 582–592.
- McDermott, J. J. 2001. Symbionts of the hermit crab *Pagurus longicarpus* (Decapoda: Anomura): new observations from New Jersey waters and a review of all known relationships. Proceedings of the Biological Society of Washington 114: 624–639.
- McDermott, J. J. 2001. Status of the Nemertea as prey in marine ecosystems. Hydrobiologia 456: 7–20.
- McDermott, J. J. 2001. Biology of *Chiridotea caeca* (Isopoda: Idoteidae) in the surf zone of exposed sandy beaches along the coast of southern New Jersey, U.S.A. Ophelia 55: 1–13.
- McDermott, J. J. 2002. Biology of the relationship between the parasitic isopods *Stegias clibanarii* Richardson, 1904 and *Bopyrissa wolffi* Markham, 1978 (Bopyridae) and the intertidal hermit crab *Clibanarius tricolor* (Gibbes, 1850) (Anomura) in Bermudian waters. Ophelia 56: 33–42.
- Williams, J. D., & J. J. McDermott. 2004. Hermit crab biocoenoses: a worldwide review of the diversity and natural history of hermit crab associates. Journal of Experimental Marine Biology and Ecology 305: 1–128.
- McDermott, J. J. 2005. Food habits of the surf-zone isopod *Chiridotea caeca* (Say, 1818) (Chaetiliidae) along the coast of New Jersey, USA. Proceedings of the Biological Society of Washington 118: 63–73.
- McDermott, J. J. 2005. Biology of the brachyuran crab *Pinnixa chaetopterana* Stimpson, 1860

- (Decapoda: Pinnotheridae) symbiotic with tubicolous polychaetes along the Atlantic coast of the United States, with additional notes on other polychaete associates. Proceedings of the Biological Society of Washington 118: 742–764.
- McDermott, J. J. 2006. The biology of *Austinixa* gorei (Manning &Felder, 1989) (Decapoda: Brachyura: Pinnotheridae) symbiotic in the burrows of intertidal ghost shrimp (Decapoda: Thalassinidea: Callianassidae) in Miami, Florida. Crustaceana 79: 345–361.
- McDermott, J. J. 2006. Nemerteans as hosts for symbionts: a review. Journal of Natural History 40: 1007–1020.
- McDermott, J. J. 2007. Ectosymbionts of the nonindigenous Asian shore crab, *Hemigrapus* sanguineus (Decapoda: Varunidae), in the western north Atlantic, and a search for its parasites. Journal of Natural History 41: 2379–2396.
- McDermott, J. J. 2009. Hypersymbioses in the pinnotherid crabs (Decapoda: Pinnotheridae): a review. Journal of Natural History 43: 785–805
- McDermott, J. J. 2009. Notes on the unusual megalopae of the ghost crab *Ocypode quadrata* and related species (Decapoda: Brachyura: Ocypodidae). Northeastern Naturalist 16: 637–646.
- McDermott, J. J., J. D. Williams, & C. B. Boyko. 2010. The unwanted guests of hermits: A global review of the diversity and natural history of hermit crab parasites. Journal of Experimental Marine Biology and Ecology 394: 2–44.
- McDermott, J. J. 2011. Parasites of shore crabs in the genus *Hemigrapsus* (Decapoda: Brachyura: Varunidae) and their status in crabs geographically displaced: a review. Journal of Natural History 45: 2419–2441.

- McDermott, J. J. 2013. The distribution of ghost crab megalopae, *Ocypode quadrata* (Decapoda: Brachyura: Ocypodidae), beyond the presumptive northern boundary of adult populations in the northwest Atlantic. Northeastern Naturalist 20: 578–586.
- McDermott, J. J. 2014. A new genus and species of pinnotherid crab (Decapoda: Brachyura: Pinnotheridae: Pinnothereliinae) with a unique male abdominal appendage, and its symbiotic relationship with a sipunculan worm (Sipuncula) from Miami, Florida, U.S.A. Proceedings of the Biological Society of Washington 127: 367–390.
- McDermott, J. J., & J. N. Kraeuter. 2015. Occurrence of first crab instars of the Atlantic ghost crab *Ocypode quadrata* (Decapoda: Brachyura: Ocypodidae) along the coast of Maine, U.S.A. Proceedings of the Biological Society of Washington 128: 98–102.

Taxa named by John J. McDermott

Carcinonemertes pinnotheridophila McDermott & Gibson, 1993

Laminapinnixa McDermott, 2014

Laminapinnixa miamiensis McDermott, 2014

Taxa named in honor of John J. McDermott

Pseudostegias macdermotti Williams & Boyko, 1999 (synonym of P. dulcilacuum Markham, 1982)

Claustrathelges macdermotti Williams & Boyko, 2016