



**PATSY ANN MCLAUGHLIN**  
**MAY 27, 1932-APRIL 4, 2011**

Rafael Lemaitre \*

Smithsonian Institution, National Museum of Natural History, Department of Invertebrate Zoology, 4210 Silver Hill Road,  
Suitland, MD 20746 USA

DOI: 10.1163/1937240X-00002095

Patsy Ann McLaughlin was born in Virginia Mason Hospital, Seattle (King County), Washington state. She passed away from heart failure at a hospital near her home in Sedro-Woolley, Washington, less than two months short of her 79th

birthday. Anyone who met this unique and strong-minded woman quickly learned that she preferred to be called "Pat," and that she was as unpretentious as that short name. Her father, Elmer Robert McLaughlin (1901-1990), was born in

---

\* Corresponding author; e-mail: lemaitrr@si.edu

California, worked as a U.S. Navy payroll officer in San Francisco and as a finance clerk in Seattle. Her mother, Edna Pearl Lessenger (1901-1954), was born in Iowa, obtained a nursing certificate in Illinois, briefly worked as a telegrapher for a railroad in the Pacific Northwest, and continued her nursing in Palo Alto, California, for several years prior to her death. Pat had neither siblings, nor children; her ashes were scattered in Fidalgo Bay, Washington.

#### EARLY YEARS (UNTIL 1965)

Only sketchy information concerning Pat's early years and upbringing exists since it was a troubled part of her life that caused her pain when remembered, and she seldom mentioned it even to her closest friends. It is known that Pat's father had lived in San Francisco, and her mother in Iowa prior to 1930. Yet, at least two years before and some years after her birth, Pat's parents lived in Seattle. The couple separated when Pat was very young – her father, immediately; and her mother, eventually, returning to California. The parental split was an event that affected Pat deeply. The little girl appears to have been sent to live with an aunt for a short time, and at age six, for unknown reasons, but probably because she was already of school age, was sent alone by train to live back with her father in San Francisco. It is not surprising that this “spirited” little girl was then enrolled in San Francisco's Notre Dame des Victoires catholic elementary school. Later in life, Pat would often reminisce to close friends about this period of her childhood, during which she had entertained the idea of becoming a nun. Pat's Mother Superior Julia, of the Sisters of St. Joseph of Orange, wisely asked her to wait before making a decision to pursue a spiritual path. In later years, Pat and one of her teaching nuns shared frequent correspondence.

Pat then attended Palo Alto Junior High School, graduating in 1946, and Palo Alto Senior High School, graduating in 1949. She next chose to attend the University of Utah, Salt Lake City, remaining there about two years, obtaining no degree. Shortly thereafter, Pat enrolled in the University of Washington, Seattle, where she was unable to make the grades required of a student. By 1950, she had returned to California where she lived with her mother in Palo Alto, and decided to enlist in the military. The Women's Armed Services Integration Act of 1948 finally enabled women to serve as permanent, regular members of the armed forces, although enlistment by women under age 21 required parental consent. Consequently, in 1951, at age 19 and with the consent of her parents, Pat entered the U.S. Air Force WAF (Women in the Air Force) program, attended the Technical School at Keesler Air Force Base, Mississippi, and worked as a Radar Mechanic during the era of the Korean War (1950-1953). Pat truly liked the military and aspired to become an officer, but found it difficult to keep up with the physical and other demands required of her male counterparts. When her commanding officer told her that she would make a “lousy” officer, not only was Pat greatly disappointed, in disgust she decided to terminate her military “career” one month before her official discharge in 1955. This would not be the last time in her life that Pat would show such stubbornness. Whether, as some friends suspect, Pat's

innate toughness was a result of her military experience, or was a natural personality trait, she often could be harsh in her opinions and unforgiving of mediocrity and shallowness. Underneath, however, she was caring and could be helpful to a fault.

Following her service in the Air Force, and aided financially by the G.I. Bill, Pat once more enrolled in the University of Washington, Seattle, where she intended to obtain a degree in food technology. Thankfully for carcinology, one of her instructors, Dixie Lee Ray (1914-1994), a well-known marine biologist (who, in 1973, would become chair of the U.S. Atomic Energy Commission, and who, in 1976, would be elected the first woman governor of the state of Washington) convinced Pat to pursue, instead, a degree in the natural sciences. Under the mentorship of the notable invertebrate zoologist Paul Illg, Pat earned her Bachelor of Arts degree with a major on zoology in 1957. She immediately landed a job as a Fishery Biologist at the Biological Laboratory of the Bureau of Commercial Fisheries in Seattle, where she worked with J. Frank Hebard until 1960. The main thrust at the Bureau was the study of Bering Sea fisheries. Pat worked identifying the benthic invertebrate fauna co-existing with the Alaskan king crab *Paralithodes camtschaticus*, and in particular studying the stomach contents of this crab based on specimens captured by the trawler “Mitkof” off the Alaska Peninsula in the southeastern Bering Sea. A short but key paper resulted from that beginning period of her research, which even to this day remains the basis of knowledge of the diet of this commercially important anomuran crab (McLaughlin and Hebard, 1959). One of Pat's remarkable lifetime characteristics was her refusal to waste any research efforts; any work that she carried out was turned into a manuscript for publication. Thus, it is not surprising that even her first stint in a biology laboratory resulted in a scientific paper.

It is almost certain that Pat must have received the hermit crab mantle, or at least the inspiration to study these anomurans, directly from Belle Alice Stevens (1894-1960), a well-known science teacher in the Seattle area who taught at St. Nicholas High School (McLaughlin and Gilchrist, 1993). Stevens had made the first contributions to the knowledge of north Pacific hermit crabs based on her experiences and collections at the Puget Sound Biological Station, Friday Harbor, San Juan Islands. Stevens also had a Research Assistant appointment in the Oceanography Department at the University of Washington, where the two must have met while Pat was working with the Bureau of Commercial Fisheries. Her expertise in hermit crabs began to develop after Stevens died and Pat had the opportunity to work with Steven's collections. Pat treated Stevens only briefly in her paper on “Women's contributions to carcinology” (McLaughlin and Gilchrist, 1993), and regrettably a proper obituary of Stevens has yet to be published.

Pat's long time mentor, the famous cirripedologist Dora Priaux Henry (1904-1999), recruited her in 1960 as Assistant Zoologist at the Department of Oceanography, University of Washington. There she worked on the sorting and identification of euphausiid collections from midwater trawl samples, barnacle settling rates, and also served as supervisor in the sorting of the department's amphipod samples.

Dora was a productive and knowledgeable scientist as well as an experienced editor, and over time became Pat's hero and close friend (Pat wrote Dora's obituary: McLaughlin et al., 2000). It must have been Dora who fixed in Pat a phenomenal, even obsessive work ethic, and who also instilled in her not only the strictness and accuracy that characterized her own writings, but an unforgivable critical ability when it came to reviewing the writings of others. Those who asked Pat to review manuscripts, or her students, quickly discovered that her comments could be devastating! Dora also had a great influence in Pat's strong belief in the equal treatment of women in the work place, even at a time when this was a new concept. While at the Department of Oceanography, Pat continued to work in a large, 3-year ecological survey of the invertebrates from the eastern Bering Sea being conducted by the Bureau of Commercial Fisheries (McLaughlin, 1963). It was during this time in her professional life that she developed great skills at sorting and handling the complexities of the taxonomy of invertebrates in general, and crustaceans in particular. She also became acquainted, primarily through correspondence and loans of specimens, with well-known carcinologists in the U.S. and abroad, such as F. A. Chace, Jr. (Smithsonian Institution, Washington, D.C.), and L. B. Holthuis (Rijksmuseum van Natuurlijke Historie, Leiden), among many others. Furthermore, Pat's contact with Dora at that time was the catalyst for her early interest in the taxonomy of barnacles, which continued throughout her life albeit she published on the group only sporadically. As an associate investigator under one of Dora's National Science Foundation grants, Pat worked in the study of new techniques for evaluating quantitative diagnostic characters in barnacle taxonomy. The two went on to co-author several important papers including: the discovery of complementary males in balanomorphs (Henry and McLaughlin, 1965, 1967, 1986), a group previously thought to be exclusively hermaphroditic; and the unequalled, meticulous revision of the *Balanus amphitrite* complex (Henry and McLaughlin, 1975), for which Pat planned and carried out the detailed quantitative aspects, most of which she had to later finish writing while simultaneously working on her Ph.D. dissertation.

#### WASHINGTON, D.C. YEARS (1965-1968)

News of Pat's abilities as a competent biologist and carcinologist reached Waldo L. Schmitt at the Smithsonian Institution, Washington, D.C., who offered Pat a job in 1963 as his assistant to work in his ongoing revision of the New World pinnotherid crabs. After some indecision because she was unsure she could do the job properly, Pat declined, although in reality she was quite happy working with barnacles in Dora's laboratory. Ultimately, Pat was recruited in 1965 through the Smithsonian's Oceanography and Limnology Program to work in the recently formed Smithsonian Oceanographic Sorting Center. As result, Pat moved across the country to Washington, D.C., to begin a new job as Supervisor for Invertebrates at the Sorting Center. She was in charge of a large operation that included the supervision of 18 technicians in the sorting and preliminary identifications of numerous and varied benthic samples from, among other sources, the International Indian Ocean Expedition. While

there, Pat took advantage of the association that existed between the staff of the Smithsonian and George Washington University, and obtained first her M.Ph. (or masters) in 1969 and then her Ph.D. in 1972. On July 12, 1972 she successfully defended her dissertation entitled: "The hermit crabs of the genus *Pagurus* (Crustacea: Decapoda: Paguridae) from northwestern North America, with a partial revision of the genus." Approval of her defense was not without first having to iron out some taxonomic disagreements with F. A. Chace, Jr., who served as her advocate, but who had to be abundantly convinced by Pat of the justification for removing *Pagurus gilli* and *P. cavimanus* from *Pagurus* to place them in *Elassochirus*. He finally realized that Pat was correct. When Pat published this outstanding, voluminous doctoral work, she added *Paguristes* for good measure (McLaughlin, 1974), and it remains to this day an unequalled, indispensable monograph, beautifully illustrated mostly with Pat's own drawings. Years later, Chace would write to Pat thanking her for being at the time just about the only person willing to work on the taxonomy of hermits, saying: "I shall never understand why anyone wants to study these asymmetrical beasts that refuse to recline properly on demand and that vary to such an extreme that definition of specific characters is a Ouija-board activity but I'm mighty glad that someone does." [F. A. Chace, Jr., in litt.]. Pat worked at the Sorting Center until, once again, she demonstrated her uncompromising character and resigned in 1968 after experiencing serious discrepancies with the director, according to her own correspondence, over "administrative philosophies."

#### MIAMI YEARS (1969-1987)

Without having yet graduated from George Washington University, Pat then moved to south Florida in 1969, where she was hired at the Rosenstiel School of Marine and Atmospheric Science (RSMAS), University of Miami, to work first as Research Assistant and later as Research Associate, with Anthony ("Tony") J. Provenzano, Jr. With Tony, funded by the National Science Foundation, she concentrated in detailed studies of morphological variations and systematics of pagurids and cirripedes, using as a base the rich collections obtained aboard RSMAS vessels during broad expeditionary cruises that trawled the deep waters of the western and eastern tropical Atlantic, and tropical eastern Pacific. It was at this time that she learned from Provenzano the techniques of decapod larval rearing and maintenance of marine organisms in the laboratory. That experience served her well for she then became an expert on larval development, and over her lifetime published 26 important papers on the larvae of pagurids, lithodids, and brachyurans, and incorporated larval evidence in her evolutionary studies of anomurans. Numerous papers were published during those productive Miami years, most prominently the multiple-part series revising *Paguristes* and the *Pylopagurus*-like group of species. During her time at RSMAS she also completed writing and published her dissertation (McLaughlin, 1974) and, as previously mentioned, her landmark, co-authored work on barnacles (Henry and McLaughlin, 1975). Her tenure at RSMAS ended dramatically in 1975. Her personal correspondence reveals that the University decided to terminate her employment based on accusations of incompetence. She fought this

unjust charge valiantly by both threatening legal action, and asking numerous senior carcinologists around the world to provide her with letters of support attesting to her qualifications, and she then presented these to the University of Miami Women's Council to plead her case. Pat still lost her job, but the charges of incompetence were retracted.

While at the University of Miami, Pat married Emmanuel J. McGeorge ("Mac"), the resident electrician at RSMAS. The two met, by Pat's own account, when "he came in [the laboratory] to change a light bulb one day" (The Miami Herald, Oct. 27, 1973). They moved into a small house in South Miami, which she and Mac extensively remodeled as a library and laboratory to allow Pat to comfortably conduct her research on crustaceans. Pat and Mac shared an interest in the breeding of dogs, especially standard and giant schnauzers, of which over the years they always kept several living in their house like any other family members. Undisturbed, Pat worked tirelessly, late and at all days and hours of the week, on her hermit crabs, which she patiently and exquisitely illustrated using ink line-drawings and stippling. Mac in turn, became proficient in photography and darkroom techniques, and often prepared the photographs for her publications. She named two new species after her husband: *Pylopagurus mackgeorgei*, and *Decaphyllus maci*. They remained happily married until Mac passed away tragically, after a long and debilitating illness, in February 9, of 1996.

After leaving RSMAS, Pat obtained a position as Courtesy Professor and Research Scientist at the Department of Biological Sciences, Florida International University (FIU), also in Miami, where she worked from 1975 until 1987. It was not a tenured position and depended on grants, and included teaching duties. During that period she also worked for two years (1975-1977) as sorting center director of a consulting firm, "Applied Marine Ecological Services, Inc.," which got her involved in various environmental studies in Florida in general, and Biscayne Bay in particular.

By this time in 1970s, Pat had already become one of the best-known specialists on hermit crabs in the world. It was also a time when there was a hermit crab pet craze in the U.S., and Pat was asked to serve as consultant for the "Great American Crab Company," which used a large *Coenobita* hermit crab named "Enormous" as their company mascot. For publicity, the company arranged for Pat to take "Enormous" to New York City to participate in a popular television show called "To Tell The Truth," a show that featured a panel of celebrities attempting to correctly identify a contestant who has an unusual occupation or experience, from impostors pretending to be the central contestant. "Enormous" and several other hermit crab companions, were crated, and off they flew with Pat to New York City, whereupon landing they were given a red carpet treatment, with assorted dignitaries that included Miss New York and members of the press. They were presented with a bouquet of roses by Miss New York, which

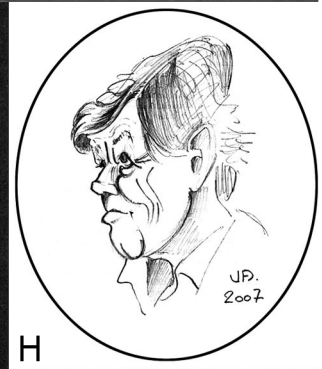
"Enormous" promptly proceeded to rip apart with the claws when Pat held the flowers close enough so the two could be photographed. In the hotel, the crabs were kept in the bathtub, and at the show studio, "Enormous" managed to pinch a stagehand. When it was Pat's time on the show, she and her impostors were obliged to state "My name is Patsy McLaughlin and I work on hermit crabs," and the panelists then had to ask questions to discover which was the real hermit crab expert. When the question was asked if hermit crabs and horseshoe crabs were members of the same family, Pat gave the only correct response, answering "no, horseshoe crabs belong with the spiders," and thus, she was identified by some of the panelists as the real hermit crab expert. She and "Enormous" returned home to Florida with a few prizes.

While at FIU, Pat published numerous papers, taught courses, and served as major professor for several students (including the author of this obituary), all the while overseeing various environmental studies. One of those studies was conducted at Anclote Anchorage and led to the discovery and description by her of a new species of Cephalocarida, the first known from the Gulf of Mexico: *Lightiella floridae* McLaughlin, 1976. It was at FIU where Pat completed her classic book "Comparative Morphology of Recent Crustacea" (McLaughlin, 1980), a spin-off that originated from a manual developed for her graduate lectures and laboratory sessions for her course "Biology of Crustacea." Her paper on the phylogeny of hermit crabs (1983) was the first ever use of cladistic methodology in any decapod group. She debunked the prevalent idea at the time that hermits were polyphyletic.

#### SEDRO-WOOLLEY YEARS (1987-2011)

When Pat's husband Mac retired from FIU in 1987, the couple quickly packed their belongings (Pat never liked south Florida) and moved to a house on a wooded property near Sedro-Woolley, Skagit County, Washington, some 105 km north of Seattle. It was a perfect setting for them to raise and enjoy their beloved schnauzers, and for Mac to attend his honey bees and other leisurely activities. There, Pat managed to get an unpaid position as a Visiting Scientist and Adjunct Professor with the nearby Shannon Point Marine Center (SPMC), Western Washington University, Anacortes, which lasted until her death. As she had previously done in south Florida, but this time surrounded by the majestic and serene surroundings of the Pacific Northwest, she settled to work in her house enclave where she kept a fully equipped laboratory and specialized crustacean library. With the advent of the internet, her place quickly became the world epicenter of hermit crab knowledge and consultation, and her home studio got filled to the brim, even more than before, with specimens from all over the world. Of the 193 papers (excluding encyclopedia articles) that she published, 153 (79%) were produced during the Sedro-Woolley years. As result she placed SPMC in the carcinological world map, even though she hardly ever used their facilities.

Fig. 1. Patsy A. McLaughlin, different periods of her life. A, at age 19; B, on deck of trawler "Mitkoff," circa 1960; C, on board "Anton Bruun," cruise 16, 1966; D, with schnauzer at Stuart-Fort Pierce, Florida, 1983; E, during Dora P. Henry's funeral service on board the R/V *Thompson*, with friends J. Armbrust (right) and G. Holm (center), May 3, 2002; F, at Paris Museum laboratory 2005; G, at Sedro-Woolley house after receiving dedicated copy of *Zoosytema*, with "EJ," 2006; H, caricature drawn at Paris Museum by French artist J.-F. Dejouannet, 2007.



In the early 1990s, Pat was invited to the “International Decapod Symposium” to be held in Frankfurt, Germany in 1993, and was asked to contribute a presentation on the subject of “carcinization in the Anomura” for a chapter in the introductory section of a book on “primitive crabs.” Pat knew this topic would be difficult and best done with two minds and a large institutional library close by, so she asked me to join her as co-author. She was never a fan of attending meetings, in fact despised talking in public, and thus I would be called upon to make the presentation for the meetings. Although the book was never published, our paper was, in a two-part series (McLaughlin and Lemaitre, 1997; McLaughlin et al., 2004). The study still generates controversy as it challenged the validity of the traditional view that hermit crabs (Paguridae, i.e., *Pagurus*) gave rise to king crabs (Lithodidae, i.e., *Lithodes* and *Paralithodes*) or “hermit to king” hypothesis, and proposed instead the reverse, that king crabs gave rise to hermit crabs or “king to hermit” hypothesis. This conclusion suited Pat’s character perfectly as she was no stranger to controversy, and in fact relished rattling the status quo when there was legitimate reason and evidence to do so. The second part incorporated new data on larval development of lithodids, and although molecular-based studies have since favored the traditional “hermit to king” hypothesis, the larval or morphological evidence presented in the “carcinization” papers have yet to be adequately addressed, and as a consequence, modern hermit crab phylogenies continue to be incongruent.

In the mid 1990s, Pat began a series of visits to Alain Crosnier’s laboratory at the Natural History Museum in Paris. Alain lured her with the prospect of working the new and abundant collections from French expeditions in the Pacific and western Indian Ocean. The collections were far beyond her expectations, and she enthusiastically dove into their study. Pat’s papers based on those collections transformed and increased exponentially our knowledge of paguroids from the Indo-West Pacific, and indeed the world over. On the taxonomic side of paguroids alone, her contributions are unequalled in the history of this group. Ultimately, she laid the foundation of our knowledge of the diversity and anatomy of hermit crabs, and in the process named (as sole author or jointly with collaborators), one family, 37 genera, and 163 species of paguroids. She named 30% of the current paguroid genera, and a remarkable 45% of the Paguridae alone. As result of her efforts, several colleagues organized and edited a special volume of the French journal *Zoosystema* [Lemaitre and Crosnier, 2006, vol. 26 (2)] to honor her contributions and career. It was to be the only major recognition she would ever receive in her life.

It was also during the 1990s when Pat acquired in Arizona from a breeder named Barbara Cetto, a schnauzer puppy that she named “EJ” (in honor of husband Mac’s first name initials). The puppy suddenly started to “write” weekly reports to her breeder titled “Letters Home,” which always began “Dear Barbara...”, and were mailed to all of Pat’s friends and correspondents, a rather numerous contingent that became addicted to the news. The letters included a detailed report of all that happened at the house from EJ’s canine perspective, including Pat’s scientific activities and

off-the-record comments. For several years the letters were mailed in paper, but eventually email arrived and the letters were broadcast electronically to friends around the world. Barbara eventually died, and the letters were then changed to “Sedro-Woolley letters,” issued in “installments” every Sunday. One day, “Lucy,” a female schnauzer, “stole” the laptop and began adding her female side of the canine story as well, and it became two letters. This went on for over 12 years for a total of 640 letters, without missing a single week, and these letters became a candid diary of Pat’s last years.

By the early 2000s, Pat’s health began to deteriorate. She required traumatic hip and knee replacements. Her eyes began to fail, and, those organs being her main working “tools,” she decided to undergo cataract operations on both eyes. However, surgery on the first eye was not very successful, and she decided to postpone surgery on the other eye. Soon her heart also began to show signs of weakness, and she had to endure many drugs and dose adjustments. Given that she lived alone and had no immediate family, she was looked after by generous neighbors and friends who cared and assisted her daily for many years until her death. Throughout these painful times, she never complained except to argue with the doctors about whether she needed medication at all (some of which she dismissively called “rat poison”), but she stoically continued, unabated, to work and even travel around the world to examine specimens in museums or even do field work, until her heart just grounded her and eventually stopped. Mercifully, death came quickly, just as she wanted it.

#### HER PERSONA AND LEGACY

To fully comprehend the impact of Pat McLaughlin’s work and accomplishments, one must start with the fact that she had a remarkably productive career with the support of relatively few grants and contracts, and without a formal salary or job for most of her life. She had no personal or family fortune, lived frugally, always depending on minimal income, which in her later years came primarily from her social security and her husband’s very modest pension.

Pat had an uncanny ability to get involved in big, tedious projects that required in-depth research or bibliographic searches, and actually finish them. Examples are the two editions of the “Common Names” (Williams et al., 1989; McLaughlin et al., 2005), the carcinization papers (McLaughlin and Lemaitre, 1996; McLaughlin et al., 2004), the paguroid fauna of New Zealand (de Saint Laurent et al., 2000; Forest and McLaughlin, 2000; Forest et al., 2000), the Taiwan catalogue of hermits (McLaughlin et al., 2007), and the anomuran checklist of the world (Boyko and McLaughlin, 2010; McLaughlin et al., 2010a, b, c; Osawa and McLaughlin, 2010).

Aside from her modest personality, sense of humor and generosity (both intellectual and material), Pat will be remembered, among many other reasons, for her productivity and unsurpassed knowledge of the anatomy of crustaceans, influential ideas about the evolution of anomurans (especially hermit crabs, on which she was the foremost world authority), superb writing, great intellectual honesty and scientific curiosity, a total dedication to promote the study of crus-

taceans, and immense love for her schnauzer dogs. She also leaves behind a long legacy of carcinologists and students around the world that she unselfishly helped and trained. She willed her personal hermit crab collections to the Department of Invertebrate Zoology, Smithsonian Institution.

However, no summary of Pat's life would be complete without admitting that her best potential employment years and career occurred during a male-dominated social era, when being a strong, opinionated woman, as she definitely was, would not favor employment, promotions, or easy intellectual participation. She was acutely aware of this from very early on in her career. In an interview for *The Miami Herald* (Oct. 27, 1973) she related that in 1955 she applied for membership to an academic organization called "Pacific Fishery Biologist" (PFB), and that the all-male membership "told me I couldn't come to their annual meeting because there were no accommodations for a woman." At that time, she said, "their practice was to put two persons in a room. Since there was only one woman, well..." Pat requested membership again the next year, and was again turned down. Finally, in 1957, PFB could not use the excuse of accommodations "because they were meeting in Seattle where I lived and I could go home overnight." Reluctantly, PFB then allowed Pat to become the first woman member; she said, "I kept my membership six years just for spite." Pat had to fight hard all her life to stand her ground to defend her ideas, and was successful, although she never was an activist. There is no doubt that history will judge her as a brilliant and outstanding carcinologists, one of the best that has existed in our field. She just happened to be a woman.

#### ACKNOWLEDGEMENTS

The invaluable help of Janet Armbrust, George Holm, Leona Robertson, Linda Schroeder, and Anita Whitney, in providing personal information or testimony about Pat's life, researching public records, and making corrections to the manuscript, is gratefully acknowledged. I am particularly thankful to George Holm, a kind soul and faithful friend, for his assistance in saving and organizing Pat's papers after her death, searching for many details, and especially for caring so lovingly for Pat during many years until her death. David M. Damkaer also provided not only valuable testimony and documents, but also a source of biographical inspiration. The Smithsonian Institution Archives, with the help of Ellen Allers, provided access to correspondence and files related to Pat's professional activities. French artist Jean-François Dejouanet, drew Pat's caricature while she worked at the Paris Museum, and kindly allowed its use here. For additional information, thanks are also due to: Paul Clark, Peter Dworschak, Leslie W. Knapp, Robert Knowlton, John Markham, Ngan Kee Ng, Peter K. L. Ng, Joseph Poupin, and Dwi Listyo Rahayu. Rose Gullede prepared the photographs.

#### REFERENCES

- Boyko, C. B., and P. A. McLaughlin. 2010. Annotated checklist of anomuran decapod crustaceans of the world (exclusive of the Kiwaoidea and families Chirostylidae and Galatheaidea of the Galatheaidea). Part 4, Hippoidea. *The Raffles Bulletin of Zoology*, Supplement 23: 139-151.
- de Saint Laurent, M., and P. A. McLaughlin. 2000. Superfamily Paguroidea, family Paguridae, pp. 104-209. In, J. Forest, M. de Saint Laurent, P. A. McLaughlin, and R. Lemaitre (eds.), *The Marine Fauna of New Zealand: Paguridea (Decapoda: Anomura) Exclusive of the Lithodidae*. NIWA Biodiversity Memoir 114.
- Forest, J., and P. A. McLaughlin. 2000. Superfamily Coenobitoidea, pp. 31-103. In, J. Forest, M. de Saint Laurent, P. A. McLaughlin, and R. Lemaitre (eds.), *The Marine Fauna of New Zealand: Paguridea (Decapoda: Anomura) Exclusive of the Lithodidae*. NIWA Biodiversity Memoir 114.
- \_\_\_\_\_, M. de Saint Laurent, P. A. McLaughlin, and R. Lemaitre. 2000. [Introduction], pp. 5-30. In, *The Marine Fauna of New Zealand: Paguridea (Decapoda: Anomura) Exclusive of the Lithodidae*. NIWA Biodiversity Memoir 114.
- Henry, D. P., and P. A. McLaughlin. 1965. Unique occurrence of complementary males in a sessile barnacle. *Nature*, London 207: 1107-1108.
- \_\_\_\_\_, and \_\_\_\_\_. 1967. A revision of the subgenus *Solidobalanus* Hoek (Cirripedia: Thoracica) including a description of a new species with complementary males. *Crustaceana* 12: 43-58.
- \_\_\_\_\_, and \_\_\_\_\_. 1975. The barnacles of the *Balanus amphitrite* complex (Cirripedia, Thoracica). *Zoologische Verhandlungen* 141: 1-254, pls. 1-22.
- \_\_\_\_\_, and \_\_\_\_\_. 1986. The Recent species of *Megabalanus* (Cirripedia: Balanomorphia) with special emphasis on *Balanus tintinnabulum* (Linnaeus) sensu lato. *Zoologische Verhandlungen* 235: 1-69.
- Lemaitre, R., and A. Crosnier (eds.). 2006. *Papers in Honour of Patsy A. McLaughlin*. *Zoosystema* 28.
- McLaughlin, P. A. 1963. Survey of the benthic invertebrate fauna of the eastern Bering Sea. *Special Scientific Report, Fisheries* 401: 1-75.
- \_\_\_\_\_. 1974. The hermit crabs (Crustacea Decapoda, Paguridea) of northwestern North America. *Zoologische Verhandlungen* 130: 1-396, 1 pl.
- \_\_\_\_\_. 1976. A new species of *Lightiella* (Crustacea: Cephalocarida) from the west coast of Florida. *Bulletin of Marine Science* 26: 593-599.
- \_\_\_\_\_. 1980. *Comparative Morphology of Recent Crustacea*. W. H. Freeman and Company, San Francisco, CA, 177 pp. 53 figs.
- \_\_\_\_\_. 1983c. Hermit crabs – are they really polyphyletic? *Journal of Crustacean Biology* 3: 608-621.
- \_\_\_\_\_, and S. Gilchrist. 1993. Women's contributions to carcinology, pp. 165-207. In, F. Truesdale (ed.), *The History of Carcinology. Crustacean Issues* 8. Balkema, Rotterdam.
- \_\_\_\_\_, and J. F. Hebard. 1959. Stomach contents of Bering Sea king crabs. *Special Scientific Report, Fisheries* 291: 1-5.
- \_\_\_\_\_, and R. Lemaitre. 1997. Carcinization in the Anomura – fact or fiction? I. Evidence from adult morphology. *Contributions to Zoology*, Amsterdam 67: 79-123.
- \_\_\_\_\_, \_\_\_\_\_, and K. A. Crandall. 2010c. Annotated checklist of anomuran decapod crustaceans of the world (exclusive of the Kiwaoidea and families Chirostylidae and Galatheaidea of the Galatheaidea). Part 3, Aegloidea. *The Raffles Bulletin of Zoology*, Supplement 23: 131-151.
- \_\_\_\_\_, \_\_\_\_\_, and C. C. Tudge. 2004. Carcinization in the Anomura – fact or fiction? II. Evidence from larval, megalopal and early juvenile morphology. *Contributions to Zoology*, Amsterdam 73(3): 165-205.
- \_\_\_\_\_, T. Komai, R. Lemaitre, and D. L. Rahayu. 2010b. Annotated checklist of anomuran decapod crustaceans of the world (exclusive of the Kiwaoidea and families Chirostylidae and Galatheaidea of the Galatheaidea). Part 1, Lithoidea, Lomisoidea and Paguroidea. *The Raffles Bulletin of Zoology*, Supplement 23: 5-107.
- \_\_\_\_\_, D. L. Rahayu, T. Komai, and T.-Y. Chan. 2007. *A Catalog of the Hermit Crabs (Paguroidea) of Taiwan*. National Taiwan Ocean University, Keelung, Taiwan, 376 pp., 133 figs., 115 photos.
- \_\_\_\_\_, A. Whitney, A. Ross, A. J. Southward, and W. A. Newman. 2000. [Obituary] Dora Priaux Henry, 24 May 1903-16 June 1999. *Journal of Crustacean Biology* 20: 199-201.
- \_\_\_\_\_, C. B. Boyko, K. A. Crandall, T. Komai, R. Lemaitre, M. Osawa, and D. L. Rahayu. 2010a. Annotated checklist of anomuran decapod crustaceans of the world (exclusive of the Kiwaoidea and families Chirostylidae and Galatheaidea of the Galatheaidea). Preamble and scope. *The Raffles Bulletin of Zoology*, Supplement 23: 1-4.
- \_\_\_\_\_, D. K. Camp, M. V. Angel, E. L. Bousfield, P. Brunel, R. C. Brusca, D. Cadien, A. C. Cohen, K. Conlan, L. G. Eldredge, D. L. Felder, J. W. Goy, R. Haney, B. Haan, R. W. Heard, E. A. Hendrycks, H. H. Hobbs, III, J. R. Holsinger, B. Kensley, D. R. Laubitz, S. E. McCoy, R. Lemaitre, R. F. Maddocks, J. W. Martin, P. Mikkelsen, E. Nelson, W. A. Newman, R. M. Overstreet, W. J. Poly, W. W. Price, J. W. Reid, A. Robertson, D. C. Rogers, A. Ros, F. R. Schram, C.-T. Shih, L. Watling, G. D. F. Wilson, and D. D. Turgeon. 2005. Common and scientific names of aquatic invertebrates from the United States and Canada: crustaceans. *American Fisheries Society Special Publication* 31: 1-533, 9 unnumbered pls.
- Osawa, M., and P. A. McLaughlin. 2010. Annotated checklist of anomuran decapod crustaceans of the world (exclusive of the Kiwaoidea and families Chirostylidae and Galatheaidea of the Galatheaidea). Part 2.

Porcellanidae. The Raffles Bulletin of Zoology, Supplement 23: 109-129.

Williams, A. B., L. G. Abele, D. L. Felder, H. H. Hobbs, Jr., R. B. Manning, P. A. McLaughlin, and I. Pérez-Farfante. 1989. Common and scientific names of aquatic invertebrates from the United States and Canada: decapod crustaceans. American Fisheries Society Special Publication 17: 1-77, 4 unnumbered pls.

RECEIVED: 18 June 2012.

ACCEPTED: 22 June 2012.

## APPENDIX

### Publications of Patsy Ann McLaughlin Obituaries, Guide Books, Encyclopedia Articles, Reviews, and Reports

Lochhead, J. H., and P. A. McLaughlin. 2007. Cephalocarida. In, McGraw-Hill Encyclopedia of Science and Technology, 10<sup>th</sup> Edition.

McLaughlin, P. A. 1963. Survey of the benthic invertebrate fauna of the eastern Bering Sea. Special Scientific Report, Fisheries 401: 1-75.

———. 1977. Review of: Newman, W. A., and A. Ross, "Revision of the balanomorph barnacles; including a catalog of the species", 1976. *Crustaceana* 32: 110-111.

———. 1985. Review of: Williams, A. B., "Shrimps, lobsters, and crabs of the Atlantic coast of the eastern United States, Maine to Florida", 1984. *Journal of Crustacean Biology* 5: 293.

———. 1986. Miscellaneous articles: World Book Encyclopedia.

———. 1987. Miscellaneous articles: World Book Encyclopedia.

———. 1990-1991. Crustacea and 23 subsection articles: McGraw-Hill Encyclopedia of Science.

———. 1994. Eumalacostraca and 3 subsection articles: McGraw-Hill Encyclopedia of Science.

———. 1997. [Obituary] Janet Haig (May 9, 1925-November 15, 1995). *Crustaceana* 70: 840-846.

———. 1998. Anomura – hermit crabs, pp. 216-221, 18 unnumbered figs. In, M. D. Richmond (ed.), *A Guide to the Seashores of Eastern Africa and the Western Indian Ocean Islands*. Sida/Department for Research Cooperation, SAREC.

———. 2004. The several "faces" of evo-devo. Review of: Scholtz, G. (ed.) "Evolutionary Developmental Biology of Crustacea", 2004. *Quarterly Review of Biology* 79: 279-282.

———. 2006. Review of: Koenemann, S., and R. A. Jenner (eds.), "Crustacea and Arthropod Relationships", *Crustacean Issues* 16, 2005. *Quarterly Review of Biology* 81: 71-72.

———, and J. F. Hebard. 1959. Stomach contents of Bering Sea king crabs. *Special Scientific Report, Fisheries* 291: 1-5. (Reprinted, 1961, *International North Pacific Fisheries Commission, Bulletin* 5: 5-8.)

———, and L. B. Holthuis. 2001. [Announcement]. Proposed replacement of syntypes of *Pagurus clypeatus* Fabricius, 1787) (Crustacea, Decapoda) by a neotype. *Bulletin of Zoological Nomenclature* 58(1): 1.

———, and P. L. Illg. 1994. [Obituary] J. F. L. Hart, 1909-1993. *Journal of Crustacean Biology* 14: 396-398.

———, A. Whitney, A. Ross, A. J. Southward, and W. A. Newman. 2000. [Obituary] Dora Priaux Henry, 24 May 1903-16 June 1999. *Journal of Crustacean Biology* 20: 199-201.

Schmitt, W. L., P. A. McLaughlin, and R. M. Feldmann. 2007. Crustacea. In, McGraw-Hill Encyclopedia of Science and Technology, 10<sup>th</sup> Edition.

### Refereed Publications:

Asakura, A., and P. A. McLaughlin. 2003. A new species of *Pseudopaguristes* McLaughlin, 2002 (Crustacea: Decapoda: Diogenidae) from Japan. *Proceedings of the Biological Society of Washington* 116: 453-463.

Bidle, K. D., and P. A. McLaughlin. 1992. Development in the hermit crab *Pagurus caurinus* Hart (Decapoda: Anomura: Paguridae) reared in the laboratory. Part I. Zoal and megalopal stages. *Journal of Crustacean Biology* 12: 224-238.

Boyko, C. B., and P. A. McLaughlin. 2010. Annotated checklist of anomuran decapod crustaceans of the world (exclusive of the Kiwaoida and families Chirostylidae and Galatheidae of the Galatheoidea). Part 4, Hippoidea. The Raffles Bulletin of Zoology, Supplement 23: 139-151.

Cassidy, P., and P. A. McLaughlin. 1997. Some shallow-water hermit crabs of the genus *Clibanarius* Dana (Decapoda: Paguridae: Diogenidae) from the east coast of Cebu, with notes on their color and ecology. *The Philippine Scientist* 33(1996): 75-93.

Chace, F. A., Jr., J. J. McDermott, R. B. Manning, and P. A. McLaughlin. 1985. Order Decapoda (shrimps, lobsters and crabs), pp. 312-358, pls. 101-116. In, W. Sterrer (ed.), *Marine Fauna and Flora of Bermuda*. John Wiley & Sons, New York.

Clark, P. F., P. K. L. Ng, C. H. J. M. Fransen, P. A. McLaughlin, P. C. Dworschak, and K. Baba. 2008. A checklist of Crustacea Decapoda collected from Conic Island Cave and adjacent areas of Hong Kong. *Journal of Natural History* 42(9-12): 913-926.

Crain, J. A., and P. A. McLaughlin. 1994. Larval, postlarval, and early juvenile development in *Pagurus venturensis* Coffin, 1957 (Decapoda: Anomura: Paguridae) reared in the laboratory, with a redescription of the adult. *Bulletin of Marine Science* 53(3)[1993]: 985-1012.

———, and ———. 2000a. Larval and early juvenile development in the Lithodidae (Decapoda: Anomura: Paguroidea) reared under laboratory conditions. 1. Subfamily Lithodinae: *Lopholithodes mandtii* Brandt, 1848. *Invertebrate Reproduction and Development* 37: 43-59.

———, and ———. 2000b. Larval and early juvenile development in the Lithodidae (Decapoda: Anomura: Paguroidea) reared under laboratory conditions. 2. Subfamily Hapalogastrinae: *Placetron wosnessenskii* Schalfew, 1892 with notes on comparative development within the subfamilies of the Lithodidae. *Invertebrate Reproduction and Development* 37: 113-127.

de Saint Laurent, M., and P. A. McLaughlin. 1999. A new genus and species of hermit crabs (Decapoda: Anomura: Paguridae) from the western Pacific. *Zoosystema* 21(1): 77-92.

———, and ———. 2000. Superfamily Paguroidea, family Paguridae, pp. 104-209. In, J. Forest, M. de Saint Laurent, P. A. McLaughlin, and R. Lemaitre (eds.), *The Marine Fauna of New Zealand: Paguridea (Decapoda: Anomura) Exclusive of the Lithodidae*. NIWA Biodiversity Memoir 114.

DeBrosse, G. A., A. J. Baldinger, and P. A. McLaughlin. 1990. A comparative study of the megalopal stages of *Cancer oregonensis* Dana and *C. productus* Randall (Decapoda: Brachyura: Cancridae) from the north-eastern Pacific. *Fishery Bulletin* 88: 39-49.

Forest, J., and P. A. McLaughlin. 1998. Descriptions of two new Japanese hermit crabs (Decapoda: Paguridae [sic]: Diogenidae). *Proceedings of the Biological Society of Washington* 111: 188-198.

———, and ———. 2000. Superfamily Coenobitoidea, pp. 31-103. In, J. Forest, M. de Saint Laurent, P. A. McLaughlin, and R. Lemaitre (eds.), *The Marine Fauna of New Zealand: Paguridea (Decapoda: Anomura) Exclusive of the Lithodidae*. NIWA Biodiversity Memoir 114.

———, M. de Saint Laurent, P. A. McLaughlin, and R. Lemaitre. 2000. [Introduction], pp. 5-30. In, *The Marine Fauna of New Zealand: Paguridea (Decapoda: Anomura) Exclusive of the Lithodidae*. NIWA Biodiversity Memoir 114.

Gherardi, F., and P. A. McLaughlin. 1994. Shallow water hermit crabs (Decapoda: Anomura: Paguridae) from Mauritius and Rodriguez Islands, with the description of a new species of *Calcinus*. *The Raffles Bulletin of Zoology* 42(3): 613-656.

———, and ———. 1995. Larval and early juvenile development of the tube-dwelling hermit crab *Discorsopagurus schmitti* (Stevens) (Decapoda: Anomura: Paguridae), reared in the laboratory. *Journal of Crustacean Biology* 15: 258-279.

Gunn, S. W., and P. A. McLaughlin. 1988. The rediscovery of *Pagurus acantholepis* (Stimpson) (Decapoda: Anomura: Paguridae). *Memoirs of the Museum of Victoria* 49: 67-71.

Haig, J., and P. A. McLaughlin. 1984. New *Calcinus* species (Decapoda: Anomura: Diogenidae) from Hawaii, with a key to the local species. *Micronesica* 19(12)[1983]: 107-121.

———, and ———. 1991. The identity of *Pagurus lepidus* (Bouvier) (Decapoda, Anomura, Paguridae) and description of a new eastern Pacific insular species. *Contributions in Science* 425: 1-12.

Harvey, A. W., and P. A. McLaughlin. 1991. Two new hermit crabs of the genus *Pagurus* (*provenzanoi* group) (Crustacea, Anomura, Paguridae) from the eastern Pacific, with notes on their ecology. *Contributions in Science* 425: 13-21.

———, C. B. Boyko, P. A. McLaughlin, and J. W. Martin. In press. Anomura, Chapter 53. In, J. W. Martin, J. Olesen, and J. T. Hoeg (eds.), *Atlas of Crustacean Larvae*. Johns Hopkins University Press, Baltimore.



- Henry, D. P., and P. A. McLaughlin. 1965. Unique occurrence of complementary males in a sessile barnacle. *Nature*, London 207: 1107-1108.
- , and ———. 1967. A revision of the subgenus *Solidobalanus* Hoek (Cirripedia: Thoracica) including a description of a new species with complementary males. *Crustaceana* 12: 43-58.
- , and ———. 1975. The barnacles of the *Balanus amphitrite* complex (Cirripedia, Thoracica). *Zoologische Verhandlungen* 141: 1-254, pls. 1-22.
- , and ———. 1986. The recent species of *Megabalanus* (Cirripedia: Balanomorphia) with special emphasis on *Balanus tintinnabulum* (Linnaeus) sensu lato. *Zoologische Verhandlungen* 235: 1-69.
- Hogarth, P. J., F. Gherardi, and P. A. McLaughlin. 1998. Hermit crabs from the Maldives, with a new species of *Catapagurus*. *Tropical Zoology* 11: 149-175.
- Ko, H. S., and P. A. McLaughlin. 2008a. Larval, megalopal and early juvenile development in *Pagurus granosimanus* (Stimpson, 1859) (Decapoda: Anomura: Paguridae) reared in the laboratory. *Invertebrate Reproduction and Development* 52: 131-142.
- , and ———. 2008b. Occurrence of *Porcellanopagurus nihonkaiensis* (Decapoda: Anomura: Paguroidea: Paguridae) in Korean waters. *Korean Journal of Systematic Zoology* 24: 129-133.
- Komai, T., and P. A. McLaughlin. 2001. Reassignment of *Pagurus lepidochirus* (Doflein) to *Nematopagurus* A. Milne Edwards & Bouvier (Decapoda: Anomura: Paguridae) and its redescription. *Crustacean Research* 30: 82-93.
- , and ———. 2005. New record and supplemental description of *Alainopaguroides andamanensis* McLaughlin (Decapoda: Anomura: Paguridae) from Japan and Indonesia. *Crustacean Research* 34: 53-64.
- Lemaitre, R., and P. A. McLaughlin. 1992. Descriptions of megalopa and juveniles of *Sympagurus dimorphus* (Studer, 1883), with an account of the Parapaguridae (Crustacea: Anomura: Paguroidea) from Antarctic and Subantarctic waters. *Journal of Natural History* 26: 745-768.
- , and ———. 1995. *Alainopagurus crosnieri*, gen. et sp. nov. (Decapoda: Anomura: Paguridae) from the Western Pacific. *Bulletin du Muséum national d'Histoire Naturelle* (4) 17A(3-4): 273-282.
- , and ———. 1996. Revision of *Pylopagurus* and *Tomopagurus* (Crustacea: Decapoda: Paguridae), with the descriptions of new genera and species. Part V. *Anisopagurus* McLaughlin, *Manucomplanus* McLaughlin, and *Protoniopagurus* new genus. *Bulletin of Marine Science* 59: 89-141.
- , and ———. 2003a. Revision of *Pylopagurus* and *Tomopagurus* (Crustacea: Decapoda: Paguridae), with descriptions of new genera and species. Addendum and taxonomic summary. *Proceedings of the Biological Society of Washington* 116: 464-486.
- , and ———. 2003b. New species of *Goreopagurus* (Decapoda: Anomura: Paguroidea) from Tasmania and a reevaluation of sexual tubes in hermit crab systematics. *Memoirs of Museum Victoria* 60: 221-227.
- , and ———. 2006. A new genus and species of the hermit crab family Paguridae (Crustacea: Decapoda: Anomura: Paguroidea) from Australia. *Zootaxa* 1297: 57-68.
- , and ———. 2009. Recent advances and conflicts in concepts of anomuran phylogeny (Crustacea: Malacostraca). *Arthropod Systematics & Phylogeny* 67: 119-135.
- , ———, and J. García-Gómez. 1982. The *provenzano*i group of hermit crabs (Crustacea, Decapoda, Paguridae) in the western Atlantic. Part IV. A review of the group, with notes on variations and abnormalities. *Bulletin of Marine Science* 32: 670-701.
- , ———, and U. Sorhannus. 2009. Phylogenetic relationships within the Pylochelidae (Decapoda: Anomura: Paguroidea): a cladistic analysis based on morphological characters. *Zootaxa* 2022: 1-14.
- , C. C. Tudge, and P. A. McLaughlin. 2010. Preliminary study of the preungual process in the Paguroidea, with emphasis on the Paguridae (Crustacea: Decapoda: Anomura). *Nauplius* 18: 13-23.
- Martin, J. W., R. B. Moffitt, and P. A. McLaughlin. 2009. Additions to the decapod crustacean fauna of the Hawaiian Islands, II. First record of the unusual hermit crab genera *Porcellanopagurus* Filhol, 1885, and *Solitariopagurus* Türkay, 1986 (Decapoda, Anomura, Paguridae). *Zootaxa* 2057: 53-62.
- McLaughlin, P. A. 1965. A redescription of the euphausiid crustacean, *Nematoscelis difficilis* Hansen, 1911. *Crustaceana* 9: 41-44.
- . 1973. Remarks on the presumed example of hybridization between two species of *Pagurus* (Crustacea: Decapoda: Paguridae). *Journal of the Marine Biological Association U. K.* 53: 563-568.
- . 1974. The hermit crabs (Crustacea Decapoda, Paguridea) of northwestern North America. *Zoologische Verhandlungen* 130: 1-396, 1 pl.
- . 1975. On the identity of *Pagurus brevidactylus* (Stimpson) (Decapoda: Paguridae), with the description of a new species of *Pagurus* from the western Atlantic. *Bulletin of Marine Science* 25: 359-376.
- . 1976a. A new species of *Lightiella* (Crustacea: Cephalocarida) from the west coast of Florida. *Bulletin of Marine Science* 26: 593-599.
- . 1976b. A new Japanese hermit crab (Decapoda, Paguridae) resembling *Pagurus samuelis* (Stimpson). *Crustaceana* 30: 13-26.
- . 1980. *Comparative Morphology of Recent Crustacea*. W. H. Freeman and Company, San Francisco, CA, 177 pp., 53 figs.
- . 1981a. Revision of *Pylopagurus* and *Tomopagurus* (Crustacea: Decapoda: Paguridae), with the descriptions of new genera and species: part I. Ten new genera of the Paguridae and a redescription of *Tomopagurus* A. Milne Edwards and Bouvier. *Bulletin of Marine Science* 31: 1-30.
- . 1981b. Revision of *Pylopagurus* and *Tomopagurus* (Crustacea: Decapoda: Paguridae), with the descriptions of new genera and species: part II. *Rhodochirus* McLaughlin and *Phimochirus* McLaughlin. *Bulletin of Marine Science* 31: 329-365.
- . 1982a. The *provenzano*i group of hermit crabs (Crustacea, Decapoda, Paguridae) in the western Atlantic. Part III. *Pagurus protuberocarpus*, a new species from the southern Caribbean. *Bulletin of Marine Science* 32: 664-669.
- . 1982b. Comparative morphology of crustacean appendages, pp. 197-256. In, L. G. Abele (ed.), *Embryology, Morphology, and Genetics. The Biology of Crustacea*. Vol. 2. Academic Press, New York.
- . 1982c. Revision of *Pylopagurus* and *Tomopagurus* (Crustacea: Decapoda: Paguridae), with the descriptions of new genera and species: part III. *Agaricochirus* McLaughlin, *Enallopagurus* McLaughlin, and *Enallopaguropsis* McLaughlin. *Bulletin of Marine Science* 32: 823-855.
- . 1983a. Internal Anatomy, pp. 1-52. In, L. H. Mantel (ed.), *Internal Anatomy and Physiological Regulation. The Biology of Crustacea*. Vol. 5. Academic Press, New York.
- . 1983b. A review of the phylogenetic position of the Lomidae (Crustacea: Decapoda: Anomala). *Journal of Crustacean Biology* 3: 431-437.
- . 1983c. Hermit crabs – are they really polyphyletic? *Journal of Crustacean Biology* 3: 608-621.
- . 1986. Three new genera and species of hermit crabs (Crustacea: Anomura: Paguridae) from Hawaii. *Journal of Crustacean Biology* 6: 789-803.
- . 1988a. The taxonomic position of *Pylopagurus liochele* Barnard (Decapoda, Paguroidea). *Crustaceana*, 54: 5-12.
- . 1988b. The rediscovery of *Ceratopagurus Yokoya* and a new genus for *Pagurus piercei* Wass (Decapoda, Paguroidea, Paguridae). *Crustaceana* 55: 257-267.
- . 1992. A reassessment of *Pagurus tricarinatus* (Stimpson, 1858) (Crustacea: Decapoda: Anomura: Paguridae). *Proceedings of the Biological Society of Washington* 105: 795-800.
- . 1994. A new genus and two new species of deep-water hermit crabs (Decapoda: Anomura: Paguridae) from the Southern Ocean. *Proceedings of the Biological Society of Washington* 107: 469-481.
- . 1996. Reassessment of '*Calcinus*' *astathes* Stebbing, 1924 (Crustacea: Anomura: Paguridae: Diogenidae). *Bulletin of the Natural History Museum, London (Zoology)* 62: 31-36.
- . 1997. Crustacea Decapoda: hermit crabs of the family Paguridae from the KARUBAR cruise in Indonesia, pp. 433-572. In, A. Crosnier and P. Bouchet (eds.), *Résultats des Campagnes MUSORSTOM*, 16. Mémoires du Muséum national d'Histoire naturelle 172.
- . 1998. Hermit crabs of the genus *Nematopagurus* (Crustacea, Decapoda, Paguridae) from south-eastern South Africa and Madagascar: new records and new species. *Zoosystema* 20(2): 315-338.
- . 2000a. Megalopal and first crab stages of *Porcellanopagurus edwardsi* Filhol, 1885 (Crustacea: Decapoda: Anomura: Paguridae). *Proceedings of the Biological Society of Washington* 113: 721-730.
- . 2000b. Crustacea: Decapoda: *Porcellanopagurus* Filhol and *Solitariopagurus* Türkay (Paguridae), from the New Caledonia area, Vanuatu, and the Marquesas: new records, new species, pp. 389-414. In, A. Crosnier (ed.), *Résultats des Campagnes MUSORSTOM*, 21. Mémoires du Muséum national d'Histoire naturelle 184.
- . 2002a. *Diogenes pallescens* Whitelegge, *D. gardineri* Alcock and *D. serenei* Forest (Decapoda: Anomura: Paguroidea: Diogenidae):

- distinct species or morphological variants? The Raffles Bulletin of Zoology 50: 81-94.
- . 2002b. A new species of the genus *Catapaguroides* (Decapoda, Anomura, Paguroidea, Paguridae) from Guam, Micronesia. *Crustaceana* 75: 495-504.
- . 2002c. A review of the hermit-crab (Decapoda: Anomura: Paguroidea) fauna of southern Thailand, with particular emphasis on the Andaman Sea, and descriptions of three new species, pp. 385-460. In: N. Bruce, M. Berggren, and S. Bussawarit (eds.), Proceedings of the International Workshop on the Crustacea of the Andaman Sea, Phuket Marine Biological Center, 29 November-20 December, 1998. Phuket Marine Biological Center, Special Publication 23(1-2): i-xii, 1-532.
- . 2002d. *Pseudopaguristes*, a new and aberrant genus of hermit crabs (Anomura: Paguroidea: Diogenidae). *Micronesica* 34: 185-199.
- . 2003a. Illustrated keys to families and genera of the superfamily Paguroidea (Crustacea: Decapoda: Anomura), with supplemental diagnoses of genera of Paguridae. *Memoirs of Museum Victoria* 60: 111-144.
- . 2003b. Reassignment and redescription of "*Eupagurus*" *microps* Balss, 1911 (Crustacea, Decapoda, Paguridae), with notes on *Bathypaguroopsis kuroshioensis* (Miyake, 1978). *Zoosystema* 25: 635-642.
- . 2003c. A new genus and species of hermit crab (Decapoda: Anomura: Paguridae) from seamounts off south-eastern Tasmania, Australia. *Memoirs of Museum Victoria* 60: 229-236.
- . 2004a. A reappraisal of the hermit crab genera *Catapagurus* A. Milne-Edwards and *Hemipagurus* Smith (Crustacea: Decapoda: Anomura: Paguridae), with the description of a new species. *Zootaxa* 433: 1-16.
- . 2004b. A description of the first complete specimen of *Diogenes guttatus* Henderson, 1888 (Decapoda: Anomura: Paguroidea: Diogenidae). *Zootaxa* 466: 1-8.
- . 2004c. Crustacea Decapoda: a review of the hermit crab genus *Nematopagurus* A. Milne-Edwards & Bouvier, 1892 and the descriptions of five new species (Crustacea: Decapoda: Paguridae), pp. 151-229. In: B. Marshall and B. Richer de Forges (eds.), *Tropical Deep-Sea Benthos*. Vol. 23. Mémoires du Muséum national d'Histoire naturelle 191.
- . 2004d. A new genus and species of hermit crab (Crustacea: Anomura: Paguroidea) from northwestern Australia. *Records of the Western Australian Museum* 22: 101-108.
- . 2004e. Redescription of *Tomopaguroides valdiviae* (Balss, 1911) (Crustacea, Decapoda, Anomura, Paguroidea, Paguridae) with notes on variation and female morphology. *Zoosystema* 26: 469-481.
- . 2004f. *Paguristes puniceus* Henderson, 1896 (Decapoda: Anomura: Paguroidea: Diogenidae): a study in intraspecific variability. *Zootaxa* 742: 1-28.
- . 2005a. A replacement name for the hermit crab genus *Haigia* (Decapoda, Anomura, Paguroidea, Paguridae). *Crustaceana* 78: 503-504.
- . 2005b. The "*Troglopagurus* group" of *Diogenes* (Decapoda: Anomura: Paguroidea: Diogenidae) revisited. *Journal of Crustacean Biology* 25: 598-619.
- . 2006. Two new Paguridae (Crustacea, Decapoda) from New Caledonia and environs, pp. 335-347. In: B. Richer de Forges and J.-L. Justine (eds.), *Tropical Deep-Sea Benthos*. Vol. 24. Mémoires du Muséum national d'Histoire naturelle 193.
- . 2007a. A new genus and new species in the hermit crab family Pylojacquesidae (Crustacea: Anomura: Paguroidea). *Proceedings of the Biological Society of Washington* 120: 56-62.
- . 2007b. A new species of *Pteropagurus* McLaughlin & Rahayu, 2006 and a new genus and species of scaphopod dweller (Crustacea, Decapoda, Anomura: Paguroidea, Paguridae). *Zoosystema* 29(3): 503-513.
- . 2007c. New records and a new species in the genus *Turleania* McLaughlin, 1997. (Crustacea, Decapoda, Anomura, Paguridae) from MUSORSTOM cruises, with a key to species. *Zoosystema* 29(3): 583-593.
- . 2008a. A new species of the hermit crab genus *Cancellus* (Decapoda: Anomura: Paguroidea: Diogenidae) from the PANGLAO Expeditions to the Philippine Islands. *The Raffles Bulletin of Zoology*, Supplement 19: 83-90.
- . 2008b. Australian hermit crabs of the genera *Paguristes* Dana, *Stratiotes* Thomson, and *Pseudopaguristes* McLaughlin (Crustacea: Anomura: Paguroidea: Diogenidae). *Records of the Western Australian Museum*, Supplement 73[2007]: 185-272.
- . 2008c. Hermit crabs (Crustacea: Anomura: Paguroidea) of the Dampier Archipelago, Western Australia. *Records of the Western Australian Museum*, Supplement 73[2007]: 272-288.
- , and A. Asakura. 2004. Reevaluation of the hermit crab genus *Parapagurodes* McLaughlin & Haig, 1973 (Decapoda: Anomura: Paguroidea: Paguridae) and a new genus for *Parapagurodes doederleini* (Doflein, 1902). *Proceedings of the Biological Society of Washington* 117: 42-56.
- , and J. H. Bailey-Brock. 1975. A new Hawaiian hermit crab of the genus *Trizopagurus* (Crustacea, Decapoda, Diogenidae), with notes on its behavior. *Pacific Science* 29: 259-266.
- , and J. H. Brock. 1974. A new species of hermit crab of the genus *Nematopagurus* (Crustacea: Decapoda: Paguridae) from Hawaii. *Proceedings of the Biological Society of Washington* 87: 245-256.
- , and P. F. Clark. 1997. A review of the *Diogenes* (Crustacea, Paguroidea) hermit crabs collected by Bedford and Lanchester from Singapore, and from the 'Skeat' Expedition to the Malay Peninsula, with a description of a new species and notes on *Diogenes intermedius* De Man, 1892. *Bulletin Natural History Museum, London (Zoology)* 63(1): 33-49.
- , and M. de Saint Laurent. 1998. A new genus for four species of hermit crabs formerly assigned to the genus *Pagurus* (Decapoda: Anomura: Paguridae). *Proceedings of the Biological Society of Washington* 111: 158-187.
- , and P. C. Dworschak. 2001. Reappraisal of hermit crab species (Crustacea: Anomura: Paguroidea) reported by Camill Heller in 1861, 1862 and 1865. *Annalen des Naturhistorische Museums in Wien* 103B: 135-176.
- , and J. Forest. 1997. Crustacea Decapoda: *Diacanthurus* gen. nov., a new genus of hermit crabs (Paguridae) with both recent and fossil representation, and the descriptions of two new species, pp. 236-259. In: A. Crosnier (ed.), *Résultats des Campagnes MUSORSTOM*, 18. Mémoires du Muséum national d'Histoire naturelle 176.
- , and ———. 1999. Hermit crabs of the genus *Pagurus* Fabricius (Crustacea, Decapoda, Paguridae) from south-eastern South Africa. *Annals of the South African Museum* 105(7): 297-344.
- , and F. Gherardi. 1995. Larval development in *Phimochirus roseus* (Benedict) (Decapoda: Anomura: Paguridae) reared in the laboratory. *Journal of Natural History* 29: 1167-1187.
- , and S. Gilchrist. 1993. Women's contributions to carcinology, pp. 165-207. In: F. Truesdale (ed.), *The History of Carcinology*. Crustacean Issues 8. A. A. Balkema, Rotterdam.
- , and R. H. Gore. 1992. Studies on the *provenzanoid* and other pagurid groups: VII. The zoeal and megalopal stages of *Pagurus armatus* (Dana) (Decapoda: Anomura: Paguridae), reared in the laboratory. *Journal of Crustacean Biology* 12: 448-463.
- , and ———. 1985. A new species of *Allodardanus* (Decapoda, Diogenidae) from the western Atlantic. *Crustaceana* 49: 36-41.
- , and ———. 1988. Studies on the *provenzanoid* and other pagurid groups: I. The larval stages of *Pagurus maclaughlinae* García-Gómez, 1982 (Decapoda: Anomura: Paguridae) reared under laboratory conditions. *Journal of Crustacean Biology* 8: 262-282.
- , and S. W. Gunn. 1992. Revision of *Pylopagurus* and *Tomopagurus* (Crustacea: Decapoda: Paguridae), with the descriptions of new genera and species. Part IV. *Lophopagurus* McLaughlin and *Australeremus* McLaughlin. *Memoirs of the Museum of Victoria* 53: 43-99.
- , and J. Haig. 1973. On the status of *Pagurus mertensii* Brandt, with descriptions of a new genus and two new species from California (Crustacea: Decapoda: Paguridae). *Bulletin of the Southern California Academy of Sciences* 72(3): 113-136.
- , and ———. 1984. A review of *Pagurixus* (Decapoda, Anomura, Paguridae) and a description of new species. *Crustaceana* 47: 121-148.
- , and ———. 1989. On the status of *Pylopaguroopsis zebra* (Henderson), *P. magnimanus* (Henderson), and *Galapagurus teevanus* Boone, with descriptions of seven new species of *Pylopaguroopsis* (Crustacea: Anomura: Paguridae). *Micronesica* 22: 123-171.
- , and ———. 1993. Two new species of the Pacific component of the *provenzanoid* group of *Pagurus* (Decapoda: Anomura: Paguridae) and a key to the regional species. *Bulletin of Marine Science* 52: 642-668.
- , and ———. 1995a. A new species of *Goreopagurus* McLaughlin (Decapoda: Anomura: Paguridae) from the Pacific, and a comparison with its Atlantic counterpart. *Proceedings of the Biological Society of Washington* 108: 68-75.

- , and ———. 1995b. A redescription of *Diogenes senex* Heller, 1865, sensu stricto (Decapoda: Anomura: Paguridae: Diogenidae). *Pakistan Journal of Marine Science* 4(2): 115-126.
- , and ———. 1996. A new genus for *Anapagridentes* sensu de Saint Laurent-Dechancé, 1966 (Decapoda: Anomura: Paguridae) and descriptions of four new species. *Proceedings of the Biological Society of Washington* 109: 75-90.
- , and D. P. Henry. 1972. Comparative morphology of complementary males in four species of *Balanus* (Cirripedia: Thoracica). *Crustaceana* 22: 13-30.
- , and ———. 1992. *Megabalanus krakatauensis* (Nilsson-Cantell, 1934) (Cirripedia: Balanomorphia) revised. *Bulletin Zoologisch Museum, University of Amsterdam* 13(7): 73-77, fig. 1, pl. 1.
- , and P. J. Hogarth. 1998. Hermit crabs (Decapoda: Anomura: Paguroidea) from the Seychelles. *Zoologische Verhandlungen* 318: 1-48.
- , and L. B. Holthuis. 1985. Anomura versus Anomala. *Crustaceana* 49(2): 204-209.
- , and ———. 2001. In pursuit of J. F. W. Herbst's species of *Diogenes* (Anomura: Paguroidea: Diogenidae). *Journal of Crustacean Biology* 21: 249-265.
- , and ———. 2002. Case 3183. *Pagurus clypeatus* Fabricius, 1787 (currently *Coenobita clypeatus*; Crustacea, Decapoda): proposed replacement of syntypes by a neotype. *Bulletin of Zoological Nomenclature* 59(1): 17-23.
- , and J. P. Hoover. 1996. A new species of *Aniculus* Dana (Decapoda: Anomura: Diogenidae) from Hawaii. *Proceedings of the Biological Society of Washington* 109: 299-305.
- , and G. C. Jensen. 1996. A new species of hermit crab of the genus *Parapagurodes* (Decapoda: Anomura: Paguridae) from the Eastern Pacific, with a description of its first zoeal stage. *Journal of Natural History* 30: 841-854.
- , and K. Konishi. 1994. *Pagurus imafukui*, a new species of deep-water hermit crab (Crustacea: Anomura: Paguroidea), with notes on its larvae. *Publications of the Seto Marine Biological Laboratory* 36(4): 211-222.
- , and D. Lacombe. 1979. *Megabalanus vesiculosus* (Darwin) from Brazil, with a redescription of the species (Cirripedia, Thoracica). *Revista Brasileira Biologia* 39: 37-41.
- , and C. E. Lane. 1975. The morphology of unique structures on the spines of a deep-water Hawaiian hermit crab (Crustacea: Decapoda: Paguridae). *Journal of Zoology, London* 176: 519-526.
- , and R. Lemaitre. 1993. A review of the hermit crab genus *Paguritta* (Decapoda: Anomura: Paguridae) with descriptions of three new species. *The Raffles Bulletin of Zoology* 41: 1-29.
- , and ———. 1997. Carcinization in the Anomura – fact or fiction? I. Evidence from adult morphology. *Contributions to Zoology, Amsterdam* 67: 79-123.
- , and ———. 2000. Reassignment of *Pagurus miyakei* Baba, 1986 to *Propagurus* (Crustacea: Decapoda: Paguridae) and description of the male. *Crustacean Research* 29: 58-64.
- , and ———. 2001. Aspects of evolution in the anomuran superfamily Paguroidea: one larval prospective. *Invertebrate Reproduction and Development* 38: 159-169.
- , and ———. 2001. Revision of *Pylopagurus* and *Tomopagurus* (Crustacea: Decapoda: Paguridae), with descriptions of new genera and species. Part VI. *Pylopagurus* A. Milne-Edwards & Bouvier, 1891, *Haigia* McLaughlin, 1981, and *Pylopaguridium*, a new genus. *Proceedings of the Biological Society of Washington* 114: 444-483.
- , and ———. 2001. A new family for a new genus and new species of hermit crab of the superfamily Paguroidea (Decapoda: Anomura) and its phylogenetic implications. *Journal of Crustacean Biology* 21: 1062-1076.
- , and ———. 2004. The discovery of two new species of *Lithopagurus* Provenzano, 1968 (Crustacea, Decapoda, Anomura, Paguroidea, Paguridae) and the first records of the genus in the western Pacific. *Zoosystema* 26(3): 483-494.
- , and ———. 2007. A new and distinctive species of the hermit crab genus *Catapaguropsis* (Crustacea: Decapoda: Anomura: Paguridae) from the South China Sea. *Zootaxa* 1560: 31-41.
- , and ———. 2008. Larvae of two species of *Trizochelēs* (Decapoda: Anomura: Paguroidea: Pylochelidae: Trizochelinae), description of the adult of one, and preliminary implications of development on pylochelid phylogeny. *Zootaxa* 1911: 52-68.
- , and ———. 2009. A new classification for the Pylochelidae (Decapoda: Anomura: Paguroidea) and descriptions of new taxa. *The Raffles Bulletin of Zoology, Supplement* 20: 159-231.
- , and T. Murray. 1990. *Clibanarius fonticola*, new species (Anomura: Paguroidea: Diogenidae), from a freshwater pool on Espiritu Santo, Vanuatu. *Journal of Crustacean Biology* 10: 695-702.
- , and J. Okuno. 2010. A new and distinctive Japanese species of *Nematopagurus* (Decapoda, Paguridae), and a new record for *Nematopagurus alcocki* McLaughlin, 1997, pp. 473-482. In: C. Franzen, S. De Grave, and P. K. L. Ng (eds.), *Studies on Malacostraca: Lipke Bijdeley Holthuis Memorial Volume. Crustaceana Monographs* 14.
- , and J. M. Paul. 2002. Abdominal tergite and pleopod changes in *Lithodes aequispinus* Benedict, 1895 (Crustacea: Decapoda: Anomura: Lithodidae) from megalopa to juvenile. *Proceedings of the Biological Society of Washington* 115: 138-147.
- , and C. Pittman. 2002. Reinstatement and rediagnosis of *Catapaguroides setosus*, and description of a second Hawaiian species of the genus (Decapoda: Anomura: Paguroidea: Paguridae). *Pacific Science* 56: 41-48.
- , and A. J. Provenzano, Jr. 1974. Hermit crabs of the genus *Paguristes* (Crustacea: Decapoda: Diogenidae) from the western Atlantic. Part I. The *Paguristes tortugae* complex, with notes on variation. *Bulletin of Marine Science* 24: 165-234.
- , and ———. 1975. Hermit crabs of the genus *Paguristes* (Crustacea: Decapoda: Diogenidae) from the western Atlantic. Part II. Descriptions of six new species. *Bulletin of Marine Science* 24[1974]: 885-938.
- , and D. L. Rahayu. 2005. Two new species of *Paguristes sensu stricto* (Decapoda: Anomura: Paguroidea: Diogenidae) and a review of *Paguristes pusillus* Henderson. *Zootaxa* 1083: 37-62.
- , and ———. 2007. *Pseudopagurodes* McLaughlin, 1997 (Crustacea: Anomura: Paguroidea: Paguridae) revisited. *The Raffles Bulletin of Zoology, Supplement* 16: 21-27.
- , and ———. 2006. A new genus with two new species of hermit crabs (Crustacea, Decapoda, Paguroidea, Paguridae) from an unique habitat. *Zootaxa* 1116: 55-68.
- , and ———. 2008a. A new genus and species of hermit crab of the family Paguridae (Crustacea: Anomura: Paguroidea) from the Vanuatu Archipelago. *Proceedings of the Biological Society of Washington* 121: 365-373.
- , and ———. 2008b. *Pteropagurus* and *Catapagurus* (Decapoda, Anomura, Paguridae): resource sharing or “any port in a storm”? *Zoosystema* 30(4): 899-916.
- , and L. Sandberg. 1995. Redescriptions of Gustaf Melin's “*Eupagurus* (*Pagurillus*)” *exiguus*, “*Eupagurus* (*Catapagurus*)” *vallatus*, and “*Eupagurus* (*Spiropagurus*)” *facetus* (Decapoda: Anomura: Paguridae) based on the type material. *Journal of Crustacean Biology* 15: 569-587.
- , and Y.-L. Wang. 2002. The apparent rediscovery of *Nematopagurus scutellichelis* Alcock, 1905 (Decapoda: Anomura: Paguroidea) in the South China Sea, with notes on other regional species of the genus. *Proceedings of the Biological Society of Washington* 115: 741-753.
- , J. A. Crain, and R. H. Gore. 1992. Studies on the *provenzanoi* and other pagurid groups: VI. Larval and early juvenile stages of *Pagurus ochotensis* Brandt (Decapoda: Anomura: Paguridae) from a northeastern Pacific population, reared under laboratory conditions. *Journal of Natural History* 26: 507-531.
- , R. H. Gore, and W. R. Buce. 1989. Studies on the *provenzanoi* and other pagurid groups: III. The larval and early juvenile stages of *Pagurus kenerlyi* (Stimpson) (Decapoda: Anomura: Paguridae) reared in the laboratory. *Journal of Crustacean Biology* 9: 626-644.
- , ———, and J. A. Crain. 1988. Studies on the *provenzanoi* and other pagurid groups: II. A reexamination of the larval stages of *Pagurus hirsutiunculus hirsutiunculus* (Dana) (Decapoda: Anomura: Paguridae) reared in the laboratory. *Journal of Crustacean Biology* 8: 430-450.
- , ———, and A. W. Harvey. 1991a. Studies on the *provenzanoi* and other pagurid groups: IV. The larval stages of *Pagurus vetaultae* Harvey and McLaughlin, 1991 (Decapoda: Anomura: Paguridae) reared in the laboratory. *Journal of Crustacean Biology* 11: 277-291.
- , ———, and ———. 1991b. Studies on the *provenzanoi* and other pagurid groups: V. The larval stages of *Pagurus arenisaxatilis* Harvey and McLaughlin, 1991 (Decapoda: Anomura: Paguridae) reared in the laboratory. *Journal of Crustacean Biology* 11: 416-431.
- , R. Lemaitre, and K. A. Crandall. 2010. Annotated checklist of anomuran decapod crustaceans of the world (exclusive of the Kiwaoidae

- and families Chirostylidae and Galatheidae of the Galattheoidea). Part 3, Aegloidea. The Raffles Bulletin of Zoology, Supplement 23: 131-151.
- , ———, and M. Ortiz. 2007. Redescription of *Pylocheles* (*Bathycheles*) *cubensis* Ortiz & Gómez, 1986, the senior synonym of *Pylocheles* (*B.*) *chacei* Forest, 1987 (Decapoda, Anomura, Paguroidea, Pylochelidae). *Zootaxa* 1406: 41-46.
- , ———, and U. Sorhannus. 2007. Hermit crab phylogeny: a reappraisal and its "fall out". *Journal of Crustacean Biology* 27: 97-115.
- , ———, and C. C. Tudge. 2004. Carcinization in the Anomura – fact or fiction? II. Evidence from larval, megalopal and early juvenile morphology. *Contributions to Zoology, Amsterdam* 73: 165-205.
- , F. A. Siddiqui, and J. A. Crain. 1993. Larval and early juvenile development in *Pagurus stevensae* Hart, 1971 (Decapoda: Anomura: Paguridae) reared in the laboratory. *Journal of Crustacean Biology* 13: 322-342.
- , G. T. Taylor, and M. L. Tracey. 1982. Systematic methods in research, pp. 29-63, figs. 1-3. In, L. G. Abele (ed.), *Systematics, the Fossil Record, and Biogeography. The Biology of Crustacea. Vol. 1.* Academic Press, New York.
- , K. Anger, A. Kaffenberger, and G. A. Lovrich. 2001. Megalopal and early juvenile development in *Lithodes santolla* (Molina, 1782) (Decapoda: Anomura: Paguroidea: Lithodidae), with notes on zoeal variations. *Invertebrate Reproduction and Development* 40: 53-67.
- , ———, and ———. 2003. Larval and early juvenile development in *Paralomis granulosa* (Jacquinot) (Decapoda: Anomura: Paguroidea: Lithodidae), with emphasis on abdominal changes in megalopal and crab stages. *Journal of Natural History* 37: 1433-1452.
- , T. Komai, R. Lemaitre, and D. L. Rahayu. 2010. Annotated checklist of anomuran decapod crustaceans of the world (exclusive of the Kiwaoidea and families Chirostylidae and Galatheidae of the Galattheoidea). Part 1, Lithodoidea, Lomisoidea and Paguroidea. The Raffles Bulletin of Zoology, Supplement 23: 5-107.
- , D. L. Rahayu, T. Komai, and T.-Y. Chan. 2007. A Catalog of the Hermit Crabs (Paguroidea) of Taiwan. National Taiwan Ocean University, Keelung, Taiwan, 376 pp., 133 figs., 115 photos.
- , S. F. Treat, A. Thorhaug, and R. Lemaitre. 1983. A restored seagrass (*Thalassia*) bed and its animal community. *Environmental Conservation* 10(3): 247-254.
- , R. Lemaitre, F. D. Ferrari, D. L. Felder and R. T. Bauer. 2008. A reply to T. W. Flegel. *Aquaculture* 275: 370-373.
- , C. B. Boyko, K. A. Crandall, T. Komai, R. Lemaitre, M. Osawa, and D. L. Rahayu. 2010. Annotated checklist of anomuran decapod crustaceans of the world (exclusive of the Kiwaoidea and families Chirostylidae and Galatheidae of the Galattheoidea). Preamble and scope. The Raffles Bulletin of Zoology, Supplement 23: 1-4.
- , D. K. Camp, M. V. Angel, E. L. Bousfield, P. Brunel, R. C. Brusca, D. Cadien, A. C. Cohen, K. Conlan, L. G. Eldredge, D. L. Felder, J. W. Goy, R. Haney, B. Haan, R. W. Heard, E. A. Hendrycks, H. H. Hobbs, III, J. R. Holsinger, B. Kensley, D. R. Laubitz, S. E. McCoy, R. Lemaitre, R. F. Maddocks, J. W. Martin, P. Mikkelsen, E. Nelson, W. A. Newman, R. M. Overstreet, W. J. Poly, W. W. Price, J. W. Reid, A. Robertson, D. C. Rogers, A. Ros, F. R. Schram, C.-T. Shih, L. Watling, G. D. F. Wilson, and D. D. Turgeon. 2005. Common and scientific names of aquatic invertebrates from the United States and Canada: crustaceans. *American Fisheries Society Special Publication* 31: 1-533, 9 unnumbered pls.
- Nyblade, C. F., and P. A. McLaughlin. 1975. The larval development of *Labidochirus splendescens* (Owen, 1839) (Decapoda, Paguridae). *Crustaceana* 29: 271-289.
- Osawa, M., and P. A. McLaughlin. 2010. Annotated checklist of anomuran decapod crustaceans of the world (exclusive of the Kiwaoidea and families Chirostylidae and Galatheidae of the Galattheoidea). Part 2, Porcellanidae. The Raffles Bulletin of Zoology, Supplement 23: 109-129.
- Paula, J., R. Nogueira Mendes, S. Paci, P. [sic.] McLaughlin, F. Gherardi, and W. Emmerson. 2001. Combined effects of temperature and salinity on the larval development of *Upogebia africana* (Crustacea, Thalassinidea). *Hydrobiologia* 449: 141-148.
- Poupin, J., and P. A. McLaughlin. 1996. A new species of *Solitariopagurus* Türkay (Decapoda, Anomura, Paguridae) from French Polynesia. *Bulletin Muséum national d'Histoire naturelle* (4) 18A: 211-224.
- , and ———. 1998. Additional records of *Calcinus* species (Decapoda: Anomura: Diogenidae) from French Polynesia with description of three new species and a key to Indo-West Pacific species of the genus. *Crustacean Research* 27: 9-27.
- Rahayu, D. L., and P. A. McLaughlin. 2006. Clarifications of the identities of *Paguristes balanophilus* Alcock, 1905 and *P. calvus* Alcock, 1905 (Crustacea, Decapoda, Anomura, Paguroidea, Diogenidae) and the description of another broadly distributed new species. *Zoosystema* 28(4): 865-886.
- , and ———. 2010. *Areopaguristes*, a generic replacement name for *Stratiotes* Thomson, 1899 (Crustacea: Decapoda: Paguroidea: Diogenidae). *Zootaxa* 2509: 67-68.
- Sandberg, L., and P. A. McLaughlin. 1993. Reexamination of *Pagurus minutus* Hess, 1865 and *Pagurus filholi* (De Man, 1887) (Decapoda: Anomura: Paguridae). *Zoologische Mededelingen* 67(13): 197-206.
- , and ———. 1998. Crustacea, Decapoda, Paguridae. *Marine Invertebrates of Scandinavia. Vol. 10: 1-113.* Universitetsforlaget, Oslo.
- Siddiqui, F. A., and P. A. McLaughlin. 2003. A new species of the hermit crab genus *Diogenes* (Decapoda: Anomura: Paguroidea: Diogenidae) from Pakistan, with a comparative diagnosis of *D. guttatus* Henderson, 1888. *Proceedings of the Biological Society of Washington* 116: 956-966.
- , Q. B. Kazmi, and P. A. McLaughlin. 2004. Review of the Pakistani species of *Diogenes* Dana, 1851 (Decapoda: Anomura: Paguroidea: Diogenidae). *Tropical Zoology* 17: 155-200.
- , P. A. McLaughlin, and J. A. Crain. 1991. Larval development of *Clibanarius antillensis* Stimpson, 1859 (Crustacea: Anomura: Diogenidae) reared under laboratory conditions: a comparison between Panamanian and Brazilian populations. *Journal of Natural History* 25: 917-932.
- , ———, and ———. 1993. Larval development of the hermit crab *Clibanarius albidigitus* (Crustacea: Anomura: Diogenidae) reared under laboratory conditions. *Marine Biology* 116: 603-613.
- Wang, Y.-L., and P. A. McLaughlin. 2000. First report of *Nematopaguroides* (Crustacea: Decapoda: Paguridae) in the Indo-Pacific, and the description of a new species. *Proceedings of the Biological Society of Washington* 113: 956-963.
- Wicksten, M. K., and P. A. McLaughlin. 1998. *Pagurus retrorsimanus* (Crustacea: Decapoda: Paguridae), a new and distinctive hermit crab from the eastern Pacific. *Proceedings of the Biological Society of Washington* 111: 153-157.
- Williams, A. B., L. G. Abele, D. L. Felder, H. H. Hobbs, Jr., R. B. Manning, P. A. McLaughlin, and I. Pérez-Farfante. 1989. Common and scientific names of aquatic invertebrates from the United States and Canada: decapod crustaceans. *American Fisheries Society Special Publication* 17: 1-77, 4 unnumbered pls.
- Yang, W. T., and P. A. McLaughlin. 1979. Development of the epipodite of the second maxilliped and gills in *Libinia erinacea* (Crustacea, Brachyura, Oxyrhyncha). *Crustaceana, Supplement* 5: 47-54.