OBITUARIES

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In Memoriam: Richard Peter Vari (August 24, 1949–January 15, 2016)

Brian L. Sidlauskas[1,2], Carl Ferraris[2], Vicki Funk[2], Lynne R. Parenti[2], Mario de Pinna[3], and Gordon McGregor Reid[4,5]

DURING his long and storied professional career, RICHARD PETER VARI (Fig. 1) established himself as one of the world's foremost systematic ichthyologists, mentored dozens of junior scientists, devoted countless hours to professional service, developed a globe-spanning network of professional collaborations, and maintained a deep and consistent commitment to his loving family and friends. We count ourselves fortunate to have been among those who knew Rich best. Though we were among his longest collaborators, colleagues, and friends, all in our profession were enriched by his presence, and we are diminished in the wake of his early passing. Herein, we highlight the lasting impact of his scholarship, service, and character, and preserve memories of Rich's joyous and collegial spirit for future generations.

Professional accomplishments and honors.—Rich's research program broadly covered systematics of freshwater fishes, with emphasis on African and Neotropical freshwater taxa. His studies covered a broad array of aspects of systematics, including morphological and molecular phylogenetic studies, taxonomic and nomenclatural issues, faunal studies, and the biogeographic implications of fish distributions. During his career, he published 163 peer reviewed papers (see Publications by Richard P. Vari) with two more in press at the time of our writing and well over a dozen more in various stages of preparation by his coauthors. He also helped edit a landmark book on Neotropical fish phylogeny (Malabarba et al., 1998) and another on the fishes of the Guiana Shield (Vari et al., 2009). Although he began his career with a comprehensive systematic study (Vari, 1978) of the marine, brackish, and freshwater terapon perches (family Terapontidae, mainly of the Indian Ocean and Western Pacific), the bulk of his later research focused on African and Neotropical freshwater fishes, in which he quickly established himself as one of the world's leading experts. His exhaustive study of the Neotropical characiform family Curimatidae spanned about 15 years, yielded more than 20 publications (e.g., Vari, 1982, 1988, 1992) and represents his most comprehensive corpus of single-authored work. Much of the rest of his scholarship is coauthored, and spans a breathtaking array of families within the ostariophysan orders Characiformes, Siluriformes, and Gymnotiformes.

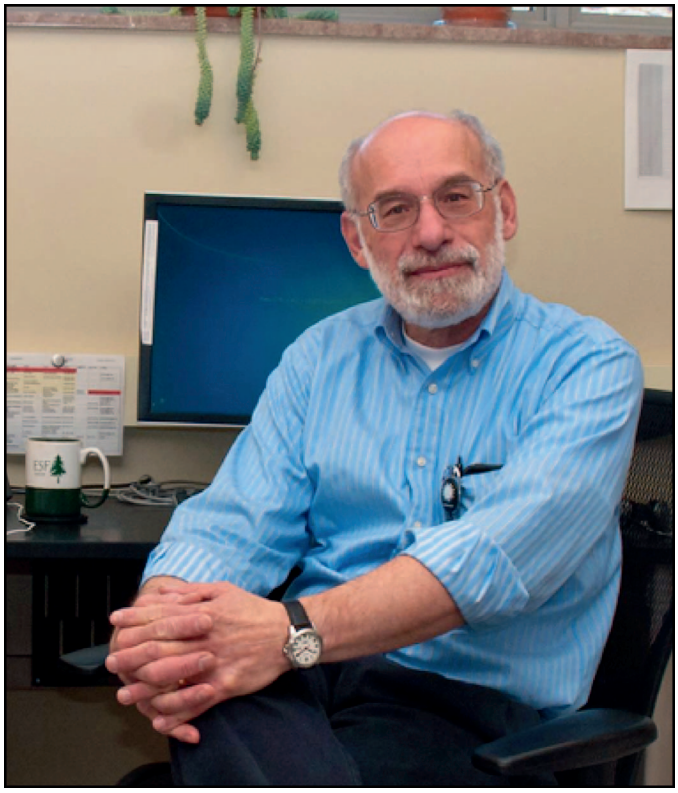

Fig. 1. Richard Vari at his desk in the National Museum of Natural History near the end of his career. Rich chose this photograph as his profile picture on Facebook, which he joined in the last few years of his life. Photographer unknown, likely a Smithsonian employee.

The body of Rich's taxonomic contributions includes 35 revisionary studies, ranging in scope from small genera to entire families, which resulted in the clarification of the validity of several hundred species and were instrumental in the discovery of many of the 194 new species described alone or with colleagues. The continent-wide revisionary approach that dominated his research program also focused attention on the large amount of previously undetected biodiversity in Neotropical waters. Familial revision of Curimatidae increased the number of known species by 50%, while that of

[1] Department of Fisheries and Wildlife, Oregon State University, 104 Nash Hall, Corvallis, Oregon 97330; Email: brian.sidlauskas@oregonstate.edu. Send reprint requests to this address.
[2] National Museum of Natural History, Smithsonian Institution, 10th St. & Constitution Ave., NW, Washington, D.C. 20560.
[3] Museu de Zoologia, Universidade de São Paulo, Av. Nazaré, 481, Ipiranga, São Paulo, SP, 04263-000, Brazil.
[4] Natural History Museum, London, Cromwell Rd., Kensington, London Sw7 5BD, U.K.
[5] School of Veterinary Science, University of Liverpool, Liverpool L69 3BX, U.K.
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Cetopsidae (de Pinna and Vari, 1995; Vari et al., 2005; de Pinna et al., 2007) doubled the total number of species. Generic revisions of some poorly studied groups resulted in even greater increases in species' numbers, e.g., the gymnotiform genus *Sternarchorhynchus* increased by 200% (de Santana and Vari, 2010) and the characiform genus *Creagrutus* by more than 300% (Harold and Vari, 1994).

In addition to taxon-based studies, Rich also studied the development and taxon distributional patterns of a variety of anatomical structures that offered new character information for future phylogenetic studies, and he examined how distributions of tropical freshwater fishes revealed patterns of biodiversity on continental and global scales. Together with Smithsonian colleague Stanley Weitzman, Rich focused attention on the phenomenon of miniaturization in numerous lineages of Neotropical fishes, and highlighted repeated patterns of structural changes among miniature species (Weitzman and Vari, 1988). Studies building on their pioneering work increased substantially the recognized numbers of miniature species throughout the tropics (Buckup, 1993; Costa and Le Bail, 1999; Bührnheim et al., 2008).

The American Society of Ichthyologists and Herpetologists recognized Rich's excellence at the beginning and near the end of his career by designating him as the 1974 winner of the Frederick H. Stoye award for best student presentation in ichthyology and the 2008 winner of the Gibbs Award for an outstanding body of published work in systematic ichthyology. His Latin American colleagues made him an honorary member of the Sociedade Brasileira de Ictiologia, and presented him with the "Golden Fish Award" from La Asociacón Colombiana de Ictiologos. To date, taxa named in Rich's honor include a genus of terapon perch (*Varia* Allen, 1991; later changed to *Variichthys* Allen, 1993), seven species of Neotropical characiform fishes (*Semaprochilodus varii* Castro, 1988; *Steindachnerina varii* Géry, Planquette, and Le Bail, 1991; *Curimata vari* Gaye-Siessegger and Fricke, 1998; *Creagrutus varii* Ribeiro, Benine, and Figueiredo, 2004; *Pseudanos varii* Birindelli, Lima, and Britski, 2012; *Oligosarcus varii* Menezes and Ribeiro, 2015; and *Xenurobrycon varii* Mendonça et al., 2016), and the recently published catfish *Gelanoglanis varii* Calegari and Reis, 2017. A much less obvious, yet nonetheless telling, honor is the nearly uncountable number of publications in which Rich's assistance was acknowledged by his colleagues. One of these publications that best reflects this is the *Historical Biogeography of Neotropical Freshwater Fishes* (Albert and Reis, 2011), which is dedicated to Rich, together with John Lundberg, for their "unflagging devotion to Neotropical Ichthyology….".

Early years, education, and training.—Rich was born on August 24, 1949 in Newburgh, New York, and spent his early years on a farm in Marlborough, New York. Claiming that a "farm was no place to raise a child," Rich's father Adolfo and mother Nerina soon decided to move the family to Manhattan, where Rich grew up and attended Catholic school. An only child, he was close to his father, a Pennsylvania-born hotel chef of Italian descent whose career included a stint at the Colorado hotel in which *The Shining* was filmed. Rich learned to cook at his father's knee, gaining an early passion for fine cooking that persisted throughout his life and helped land him a job in a Delta Airlines flight kitchen in 1979 between his postdoctoral appointments and a consultancy for the World Bank. His culinary experience also provided a point of contact and conversation with food service employees during his later career at the Smithsonian, and benefitted anyone lucky enough to be invited to a gourmet meal at his table.

The first in his family to attend college, Rich worked as doorman at Manhattan's Union Club while studying full time towards the Bachelor of Science he received from New York University in 1971. He learned to speak Italian during these college years, a process likely made easier due to early exposure to the language during visits from relatives. Though at one point he planned to study biophysics, he proceeded to earn his doctorate in 1977 through the joint graduate training program between the City University of New York and the American Museum of Natural History. Under the tutelage of Donn Eric Rosen, Rich developed an extraordinary sense of loyalty and dedication to natural history museums and their collections (Fig. 2), which he passed on in his own turn to numerous mentees at the Smithsonian. One of us (LRP) was also a student of Donn Rosen's at that time, and recalls that to Donn and other native New Yorkers (including her and Rich), the AMNH was both a cathedral and a home. All in Donn's fold felt privileged to able to spend so much time behind-the-scenes in the collections, the libraries, and, as students, at the microscope under his guidance.

Lynne also recalls (without regret) that Rich was Donn's favorite graduate student, and that they shared a unique father and son relationship. Rich would have done anything for Donn, as evidenced when they spent hours together restoring a nearly impossibly tangled gill net on a field trip to Guatemala in 1974 (Fig. 3). That tenacity to see tasks through to their completion, and drive to help those around him, characterized Rich's approach throughout his life. For example, as a graduate student, Lynne had no opportunities to do tropical fieldwork, so Rich helped fill the void by inviting her to join him on a collecting trip to Suriname after she completed her Ph.D. The offer thrilled her, remains to date her only field trip to South America, and provided the opportunity to take one of her favorite photos of Rich (Fig. 4). Here, Rich is simultaneously serious and lighthearted, and brims with optimism. Who wouldn't want to show, with pride, that they had just captured an electric eel? It was 1980, Rich was a new Curator in the Division of Fishes, National Museum of Natural History, and he was about to embark on a brilliant career.

Vicki Funk recalls the sorrow of events a few years later, when she and Rich took the train together to New York to visit Donn Rosen just before Donn's untimely death (1929–1986). While the ride up was a happy time reminiscing about all of Donn's advice and the fun they had during their respective tenures in New York, the afternoon visit was shocking and sad, and the trip back was spent trying to maintain control. Neither talked about it again until Rich was coping with his own illness, but the event illustrates the deep and meaningful relationship that Rich forged with his own mentor. That relationship likely inspired his dedicated mentorship of many others later in his career.

Postdoctoral years.—Before landing his iconic curatorial job at the Smithsonian, Rich completed two postdoctoral fellowships. The first (1977–1978) was funded by NATO/NSF (the North Atlantic Treaty Organization and the US National Science Foundation) at the British Museum (Natural History), London, while the second (1978–1979) was at the Smithsonian. Rich came to the BM(NH) to work in the Freshwater Fish Section, headed by the late Peter Humphry Greenwood and with other outstanding (now deceased)

Fig. 2. Rich Vari in 2004, surrounded by jars of preserved fishes in the collection at the National Museum of Natural History. Photo by Ali Khawaja, Smithsonian (image number 2004-11235).

ichthyologists, including Ethelwynn Trewavas, Rosemary Lowe-McConnell, Alwyne Wheeler, and Gordon John Howes. Rich, always friendly and charming, developed excellent relationships with staff and resident University of London Ph.D. students Melanie Stiassny and Gordon McGregor Reid. The BM(NH) was then engaged in an intense academic debate on the merits of 'cladism' over traditional 'gradism' in determining phyletic and biogeographical relationships for fishes and other taxa (see, for example, Rosen, 1974). Rich, a convinced cladist and product of the AMNH 'New York school,' contributed immensely to seminars and informal discussions in London (Reid, 2016). In this period, publications advocating cladism often met with acrimonious and unproductive responses from gradists. Never enthusiastic about discourse based purely on theory, Rich felt that the most helpful way to resolve issues was via well-worked, published examples of cladistic analyses in establishing well-defined monophyletic groups. He adopted this approach at the BM(NH) in his now classical study of citharinid and distichodontid (African characiform) fishes (Vari, 1979) and continued in this positive mode throughout his distinguished career. After returning to the USA to join the NMNH staff (see below), Rich made regular trips back to London. One of us (GMR) fondly remembers recreational outings with Rich to visit lesser-known natural history collections in the UK. One 'gem' they saw was the Powell-Cotton Museum, Kent, which depended heavily on income from its farmed estate. With characteristic wry humor Rich said that he was relieved to have secured a job where there was no need to worry about the cabbage crop.

Fig. 3. Unraveling a tangled gillnet in Guatemala, 1974. Left to right: Donn Rosen, Rich Vari, and unidentified field assistant. Photo courtesy of the late Carmela Rosen.

Career at the Smithsonian.—Rich became a curator in the Division of Fishes at the NMNH in 1980, with later promotions to Chairman of the Department of Vertebrate Zoology for two terms, and Interim Associate Director for Science. Over a curatorial career spanning nearly four decades, he authored myriad contributions to systematic ichthyology particularly focusing on the Neotropical and African Characiformes and Siluriformes, but in later years expanding his repertoire into studies of Gymnotiformes. At the Smithsonian, he published major revisionary studies

Fig. 4. Rich Vari in Suriname, South America, 1980, holding a newly captured and preserved electric eel. Photo by L. R. Parenti.

dealing with Alestidae, Anostomidae, Apteronotidae, Auchenipteridae, Cetopsidae, Characidae, Chilodontidae, Ctenoluciidae, Curimatidae, Helogenidae, Prochilodontidae, and Trichomycteridae, with the extensive series of volumes treating the osteology, phylogeny, morphometrics, meristics, and taxonomy of Curimatidae being particularly noteworthy. When he began his efforts, the systematics of this group had been in shambles due to maddeningly conservative external morphology and a nearly hopeless tangle of poorly described taxa and synonyms. Although it took fifteen years, tens of thousands of specimens, hundreds of dissections and the patience to extract dozens of systematic characters from the hyper-variable gill arches of these externally nondescript, silvery fishes, his painstaking revisionary work solved the systematic conundrum. The resulting volumes remain canonical works, in some cases more than four decades after their publication.

Fig. 5. Rich Vari (and a hippopotamus) at the shore on Lake Tanganyika, September 21, 2013, at the fifth international conference of the Pan-African Fish and Fisheries Association (PAFFA) in Bujumbura, Burundi. Photo courtesy of Fabio di Dario.

Rich conducted only occasional field collection trips as a curator, preferring to devote his travel to studies of the abundant unprocessed material stored in museums around the world, or to national and international conferences (Fig. 5). However, together with Carl Ferraris, he participated in the expedition to Cerro de Neblina, southern Venezuela, in 1984, and accompanied Vicki Funk on trips to Peru and Nepal in the 1980s. Extended field trips are the best way to really get to know someone, and 30 days of hiking in Nepal brought out the best in Rich. He was always even-keeled and responsible, rarely complained, and was always up for drinking a Coke, whenever they could be found. One of Vicki's favorite photos of Rich was taken on the rope-bridge over the Kali Gandaki River in Nepal (Fig. 6).

Rich met his future wife Ann (*née* McKim Williams) in 1985 during this phase of career, when she began a volunteer position in the Division of Fishes, and two weeks thereafter accidentally smashed a fluorescent lightbulb all over his desk! In a 2016 conversation at their home, Ann recounts that they quickly bonded over a shared sense of humor, natural history documentaries (including a memorable one on naked mole rats), a mutual interest in African fishes, and of course Rich's famous cooking. Ann recounts that from the very first, Rich displayed the dedication, protectiveness, and caring that characterized his approach to his family and his mentees alike, citing early morning visits to see her in the hospital during a bout of appendicitis in the first year of their relationship. During the ensuing courtship, Rich won Ann's mother over by demonstrating his ability to serve asparagus one-handed using a fork and spoon, which was apparently much more impressive than his curatorship! Gordon remembers how honored he felt when asked by Rich and Ann to be

Fig. 6. Rich Vari on a rope bridge over the Kali Gandaki River in Nepal, mid 1980s. Photo by Vicki Funk.

'best man' at their wedding in Washington, 1987, which followed a brief engagement.

Mentorship and sociological impact.—From shortly after he began working at the Smithsonian, Rich's lab was a beehive of activity. Rich used his position to identify funding opportunities to bring ichthyologists into the Smithsonian Fish Division for visits lasting from a few days to years, as well as to encourage self-funded visitors to use the Smithsonian as a base for collection study trips throughout the country. At the Museum, Rich became the "go to" person for anyone who wanted to interact with Brazilian colleagues and students. Time and again he would share his knowledge of the regulations and procedures for collaboration. He, of course, had everything outlined and sample documents available! Overall, he hosted 115 fellows, associates, interns, and students at the museum and served on doctoral and master's degree committees at institutions in the U.S. and abroad, including those of the first and fifth authors of this retrospective. He provided his mentees not only with space and access to the collections and library but also sounding boards for help with scientific problems and solutions to the logistic issues that many foreign visitors faced during their stays. The level of scientific assistance that Rich provided, even on taxonomic groups that he had not studied previously, often resulted in his becoming a collaborator and coauthor on his visitors' projects. In addition to interactions with Rich (as well as with other Smithsonian ichthyologists), visitors to his bustling lab often found themselves meeting, or rekindling relationships with, members of the Neotropical ichthyological community whom they might otherwise not have much chance to see in person, which undoubtedly led to any number of otherwise unlikely collaborative studies.

Although Rich's scientific output covered different continents and both freshwater and marine taxa, it was in Neotropical freshwaters that his heart most obviously lay. His fieldwork and museum visits were generously supported by the Smithsonian's Neotropical Lowland Research Program in which he was a Principal Investigator from 1994 through 2004. Rich developed a marvelous connection of friends and collaborators from throughout South America. Coauthors include researchers from Argentina, Brazil, Colombia, Ecuador, Guyana, French Guiana, Peru, Suriname, and Venezuela. His extraordinary human and scientific qualities assured a synergy of productivity and empathy with people from different cultures and backgrounds that can only be described as amazing. In all the countries he visited, he engendered feelings of admiration, gratitude, and pure joy in his pleasant company. In Brazil particularly, his collaborations were vast and spanned the entire spectrum of his research activities, from alpha taxonomy to molecular phylogenetics. Such liaisons started in 1988 and continue to this day with several papers still in press with coauthors, some decades younger. It is hard to find a Brazilian ichthyologist active today, of any generation, who did not benefit from his influence, sometimes decisively so. Richard Vari was certainly the most important foreign benefactor of ichthyology in Brazil's history, and is a contender for the most important foreign collaborator ever in any branch of Brazilian zoology.

Worldwide, there are many people whose careers were shaped by Rich Vari, and a substantial number whose careers would not have existed without him. Although Rich never served as a major professor for a Ph.D. student, he was quite active in formally training young ichthyologists. At the Smithsonian, he directed summer internships for eight undergraduate students (often co-publishing with them) and hosted several postdocs who received funding from the Smithsonian, as well as serving as a mentor for others who received their funding elsewhere. Mauricio Torres, an undergraduate intern from Colombia, wrote in an August 6, 2004 letter of thanks to the Smithsonian Latino Initiatives Fund that "The entire process, from a jar full of strange fishes to the submission of a manuscript has been very exciting to me, and with the support of the great professional that my advisor is, it was also edifying. He has treated me as a developing colleague, giving me confidence to express my points of view during interesting discussions. We also have had time to talk about career options in Neotropical ichthyology, which gave me a better foundation on which to plan for my upcoming graduate studies." Another section of the same letter reads: "I'm telling all this to explain that I learned this summer that high level scientists are real people, and if they can do great things in science, then I guess people like me can too." In the 12 years since, Torres has gone on to establish his own notable career, with 13 peer reviewed publications, four of which appear in *Copeia*.

Overall, Rich served on committees for four master's students and 17 Ph.D. students who received their respective degrees at 13 different schools. Those doctoral students include an author of this memorial, Brian Sidlauskas, who worked together with Rich on the systematics and evolution of anostomoid fishes ever since his first visit to the Smithsonian in 2002 as a nervous beginning graduate student. Brian's chosen thesis topic at the University of Chicago turned out to overlap a project that Rich had just begun, and Rich could have easily turned him away and defended the intellectual turf onto which the much younger scientist had inadvertently trodden. Being who he was, when confronted with an awkward and stammering student who had encroached on one of his major projects, Rich extended a hand of welcome and encouragement rather than a dismissal. This specific choice on Rich's part represented one the most pivotal and formative moments in Brian's own career, which led to a successful thesis, numerous co-authored publications, a major grant from the National Science Foundation, and fourteen years of collaboration. Another author of this essay, Mario de Pinna, first met Rich in Rio de Janeiro in 1987 during a workshop on Neotropical

distribution patterns (later published as Vanzolini and Heyer, 1988) and was amazed at how the famous Vari treated him, an unknown young undergraduate, with the same attention and respect he afforded the great established names at the event. The same can be said for dozens of others whose careers he promoted and actualized.

Service.—Rich's dedication to service rivaled his prodigious publication record and his pattern of outstanding mentorship. He held the presidency of the Biological Society of Washington, helped edit five journals, tirelessly and frequently reviewed for those journals and a variety of others, and advised the governments of Suriname and South Africa on biodiversity conservation and collection-building. Rich's advice on the design of a new collection facility at the South African Institute of Aquatic Biodiversity reaped unexpected rewards when Paul Skelton sent a coelacanth specimen for display in the Smithsonian's Sant Ocean Hall in thanks, esteem, and reciprocity.

Rich's service to ASIH began as a new graduate student and continued until shortly before his death. Until the past few years, he regularly attended the annual meeting and often gave well-organized presentations of his then-ongoing research, one of which earned him the Stoye Award. In service to the society, Rich served a five-year term on the Board of Governors, three-year terms on the Nominating committee and Gibbs' Award committee, and judged for the Stoye Award on several occasions. As he stated to several of us, Rich felt that he was best able to contribute to the society by helping to maintain a strong *Copeia*. To that end, he published 33 papers in the journal and served on the Editorial Board continuously since 2000. But his most remarkable contribution was in his prodigious number of manuscript reviews. During the past 15 years alone, he reviewed 86 manuscripts, or nearly six per year. His reviews were thorough, with hand written comments placed directly onto the manuscript that improved the presentation of already acceptable manuscripts or pointed to ways that others could be brought to an acceptable level of scholarship. Although *Copeia* protocol prohibits authors from acknowledging the assistance of peer reviewers in the published paper, Rich's detailed, useful comments and distinctive style of review undoubtedly led to his name finding its way into the acknowledgments of some papers for other reasons. Chris Beachy, the current editor for *Copeia*, writes: "In my time, Rich has clearly been the best reviewer in the ASIH. Scott [Schaefer] echoes this for his time as editor, and I suspect the others before him would report the same. Rich has been our most prolific reviewer (as many as 10 in a year) and he was always professional, excellent and very fast. The kids these days could do with following this model. He has been one of the very best servants to the ASIH." Clearly, Rich's contribution to the editorial process of *Copeia* will be hard to replace.

At the Smithsonian, Rich served as Chair of the NMNH's Department of Vertebrate Zoology for two terms, from 2005 to 2009 and again from 2011 to 2014. Rich had an independent style of management; rather than try to reach a consensus, he would listen to all sides of an argument and then make a decision that was not necessarily the most popular, but one that he thought was the best. Perhaps one of Rich's most signature managerial traits (endearing for many and, at times, annoying to those who tend to procrastinate), was his ability to execute unwelcome tasks in an efficient and timely manner. He clearly thought it was better to go ahead and finish the task (such as moving his office) in his usual excellent fashion, and he simply could not abide those who waited until the last minute. This relentless drive to complete tasks ahead of schedule, combined with his independent management style, ruffled a few feathers and scales. But, he always made his decisions based on what he thought was in the best interest of the Museum.

His reasoned counsel on the workings of a large natural history museum was sought through his appointment to the Smithsonian-wide Redesign Task Force. His last administrative appointment, in late 2014, was as Interim Associate Director for Science at the NMNH, another deeply time-consuming position critical to the operation of one of the world's great natural history museums. His dedication was such that he carried on as Associate Director through most of his illness. His willingness to take on such tasks, even as they pulled him from his research, and later, his sickbed, perhaps stemmed from the respect for natural history museums that he absorbed during his formative years at the AMNH.

Family life, personality, and hobbies.—Lists of publications, mentees, and accomplishments may capture the most tangible impacts of a life in science, but can fail to encapsulate the human spirit. Those who knew Rich recognized that his sterling personal qualities exceeded even his admirable scientific acumen. Unfailingly polite, calm, cordial, humorous, generous, and egalitarian, he seemed to be on a first name basis with everyone at the Smithsonian from the director to the janitors, who asked frequently for updates during his eventual illness. Visitors to the lab often discovered small, anonymous gifts of chocolate, cookies, and coffee at their desks in the afternoons (though we all knew that these came from Rich). Even more treasured were the hours we spent talking about science, world affairs, classical music, favorite recipes, or family matters, often with a gentle operatic aria playing in the background.

Rich regularly baked amazing cookies and cakes for the Division of Fishes' Friday morning coffee gatherings, and frequently shared them with non-Fishes staff, such as Vicki Funk, on their shared morning train ride. They often used this time to talk about research and Museum politics, which evolved into a special time to catch up and to test out possible solutions to problems. Robert Hersher (Department of Invertebrate Zoology) was also a regular recipient during the regular 6:30 coffee break that he and Rich shared on Friday morning (a ritual that lasted nearly 20 years). Rich was especially well known for his oatmeal cookies (he had many versions), so much so that several members of the staff baked cookies for his memorial.

He was a dedicated family man, rearranging his work schedule after the births of his children Thomas (1988) and Ellen (1991) to begin at 6:00 am and to end at 3:00 pm sharp. In so doing, he arrived home in time to attend sporting events and to cook the gourmet Italian meals for which he was famous, a passion that he passed on to Thomas. To maintain this schedule Rich regularly took the first train (5:07) from home to the Museum. A small, secret packet discovered in his desk at the museum contained all the contributions that his children laid out for the Tooth Fairy, which had clearly been whisked away during those early morning sojourns so that they would not be discovered at home. For Halloween and school plays, he would assemble new costumes for the children using hot glue and fabric. He served as the president of his neighborhood association, regularly judged local science fairs, and delivered mini-lectures to grade school classrooms. After his daughter Ellen

Fig. 7. The Vari family at Ellen's undergraduate graduation in 2009. Left to right: Rich, Ann, Ellen, and Thomas. Photo courtesy of Ann Vari.

brought guinea pigs home from school, he became the family's chief steward of rodent welfare, sneaking a nod to G.P. (Guinea Pig) Duke into a published acknowledgments section and even staying home one Thanksgiving to medicate an ailing pet. He brimmed with pride at his offspring's later successes in pursuing academic qualifications and adult careers, as seen in a photo captured at Ellen's 2009 graduation (Fig. 7).

Rich was an effective communicator throughout his life, constantly writing, talking on the phone, or typing out detailed emails. Many of these messages were devoted to facilitating logistics for students and colleagues, but he also loved a good joke or an opportunity to tease, and sometimes found ways to combine the two. Lynne Parenti recounts that during Rich's postdoc in London, she planned a visit there to examine holdings of African killifishes as part of her doctoral research. Naturally, she wrote to Rich and asked for his advice on hotels and other travel details. He was helpful, of course, but couldn't resist a little jab. His typed reply came on a blue Aerogram dated August 5, 1977 (R. P. Vari, in litt.): "I have checked around about your coming in November and the only major problem is the yearly outbreak of werewolves which usually occurs at that time. However, I think we should be able to get you a werewolf-proof office, even though I am sure that they would like some wholesome american [sic] blood." Through it all he kept a good sense of humor and didn't mind (well, almost always didn't mind) being the butt of a good joke himself. In many ways, Lynne considered Rich to have been the big brother she never had.

Rich's pranks could be quite elaborate and long-lasting. When Mario de Pinna was his postdoc at the Smithsonian, Rich would secretly come in his office and randomly insert papers on byzantine subjects amidst his ichthyology reprint collection. So, over the years Mario has regularly encountered inexplicable items on subjects such as "ice-cap variation in Greenland in the years 1969–1970," or on "performativity of shamanic rituals in New Guinean pottery." As a follow-up on the prank, Mario would periodically resend the found items back to Rich in anonymous packages labeled "Confidential." Incredibly enough, at least once Rich actually brought such returned bibliographic items in his luggage during a subsequent visit to São Paulo and smuggled them again into Mario's reprint files, where now they remain with Sisyphean obstinacy. But Rich also relished in far less subtle trickery. At one point he developed a liking for inserting the odd heavy brick into Mario's backpack. Not very flatteringly to his sense of awareness, Mario fell more than once for such a ruse, sometimes carrying the load unsuspectingly (but uncomfortably) for days.

Illness and passing.—Rich's brilliant life and career ended too soon after a year-long struggle with gastric cancer. Fatigue and weight loss apparent at the meetings of the Brazilian Ichthyological Society in Recife in February 2015 soon revealed themselves symptomatic of a deeper problem. Though he maintained much hope and optimism through increasingly debilitating rounds of chemotherapy, Rich's condition worsened rapidly throughout his final year and was aggravated by numerous secondary infections. He found much relief in frequent communications with family, friends, and collaborators, acupuncture, and the painstakingly detailed edits to collaborative manuscripts for which he was famous, and which he continued from his hospital bed until just months before his passing. After struggling to make it through the year-end holidays Rich declined quickly, and died at home in Fairfax County, Virginia on January 15, 2016 in the company of his family. He was 66 years old. A celebration of his life held at the Smithsonian on January 29, 2016 attracted hundreds of colleagues, family members, and friends, including many who traveled far to pay their final respects.

Concluding remarks.—The legacy that Rich Vari leaves behind measures greatly indeed, and it is difficult to imagine a more fulfilling life. The scientific community will long cherish his

meticulous, beautiful publications and his ceaseless encouragement and support of new generations of scientists. His family will remember his steadfast love, tireless dedication, and gentle spirit. His colleagues will remember his wise counsel, humanistic approach to leadership, and enduring support for all members of his team, no matter their rank or position. And for our part, we will remember the friend who extended his hand in welcome and encouragement, shared freely of his joy, wisdom, and humor, and helped us along our own journeys. It now falls to all who knew Rich to do their best to emulate his scientific acumen, care for his fellow humans, strong leadership, and dedicated mentorship. We can think of no greater way to honor his memory.

ACKNOWLEDGMENTS

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