BOOK REVIEWS

Festschrift for Ned K. Johnson: Geographic Variation and Evolution in Birds, by Carla Cicero and J. V. Remsen, Jr. (eds.). 2007. *Ornithological Monographs* no. 63, American Ornithologists' Union. viii + 114 pp. Softback, $10.00 ($9.00 for members of the American Ornithologists' Union; add $4.00 for domestic shipping, $5.00 for foreign shipping). Available from Buteo Books, 3130 Laurel Road, Shipman, VA 22971. ISBN 978-0-943610-75-7.

We lost a towering figure in North American ornithology with the passing of Ned K. Johnson in 2003. It is thus only fitting that a *festchrift* should appear in his honor. With any such publication, the reviewer must be careful to review the publication and not the person. Anyone interested in thoughtful reviews of Johnson's life and work is referred to Barrowclough and Zink's obituary in the *Ibis* (2004, vol. 146, pp. 567–568) and the editors' introductory chapter to this monograph.

Following the introduction, this book—really a volume in the A.O.U.'s long-standing occasional publication *Ornithological Monographs*—has eight chapters devoted to various aspects of avian systematics, taxonomy, and biogeography, the three pillars of Johnson's career. The first two of these chapters are more general in scope: one by Allan J. Baker on molecular studies of geographic variation and speciation, the other by Kevin Winker et al. on species concepts.

All but one of the remaining chapters focus on specific systems. James D. Rising addresses Savannah Sparrow (*Passerculus sandwichensis*) subspecies, William B. Monahan and Robert J. Hijmans hybridization in the Barred (*Strix varia*) and Spotted (*S. occidentalis*) Owls, Kristen Ruegg divergence of Swainson's Thrush (*Catharus ustulatus*) subspecies groups, Cicero (with Johnson as co-author) evolution in the Sage Sparrow (*Amphispiza belli*), and Storrs L. Olson systematics of a Pleistocene hawk. The exception is the chapter by Burns et al., a biogeographic analysis of congruence among evolutionary histories of three western endemics, the White-headed Woodpecker (*Picoides albolarvatus*), Wrentit (*Chamaea fasciata*), and California Thrasher (*Toxostoma redivivum*).

It is inevitable with any collection of papers that contributions will be uneven in quality and depth. This *festschrift* is no exception. Olson's short paper, for example, merges the long-extinct *Wetmoregyps daggetti* into *Buteogallus* on the basis of sound evidence, but his discussion almost functions as a commentary in which he dismisses past attempts to infer the species' ecology in favor of his own (plausible) interpretation. Rising's chapter seems to position itself as a treatise on the value and application of subspecies, provided taxa are defined rigorously. His reference to *t* tests and ANOVAs (p. 47) may suggest a lack of understanding that subspecies cannot be defined on the basis of average differences, but he adopts an admirably conservative approach—after all, too many subspecies have been named on trivial grounds—and issues fair warning about relying too heavily on genetic data. Rising then proceeds to dismiss all but seven of the 28 named subspecies but does so without presenting any of the relevant data and despite many of the dismissed forms being upheld in detailed, quantitative studies elsewhere (e.g., Hubbard 1974, *Nemouria* 12:1–21). Moreover, and previous warnings aside, his current divisions seem to be influenced largely by recent molecular research to which he contributed (Zink et al. 2005, *Condor* 107:21–28).

A refreshingly balanced approach can be found in Baker's chapter, which reads much like a short primer, replete with clear examples (drawn from his own research), on the use of molecular genetics to study avian speciation and biogeography. In addition to wise advice about using multiple markers and determining population number, his summary of recent findings on diversification of moas (Baker et al. 2005,

Proc. Natl. Acad. Sci. USA 102:8257–8262), penguins (Baker et al. 2006, *Proc. Royal Soc.* B 273:11–17), and neotropical parrots (Tavares et al. 2006, *Syst. Biol.* 55:454–470) is well presented and intelligible while (usually) avoiding the technical nitty gritty of the original papers. In this respect they serve as a good introduction into this important field of study.

Likewise, the chapter on species concepts by Winker, Rocque, Braile, and Pruett is a "fair and balanced" assessment of a highly contentious issue. Debates over species concepts are particularly divisive in ornithology and have often generated far more heat than light. Moreover, scientists tend to move forward cautiously on the basis of data accumulated slowly, but birders tend to want anything they deem identifiable in the field (rightly or wrongly) to be split. There is also a decided publication bias: it is "sexier" and thus easier to publish a novel taxonomic split, but almost no one thinks a taxonomic lump sexy. Given the urge—dare I say pressure?—to split, I would venture that in no other systematic endeavor is there a stronger tendency to make the data fit the hypothesis. Winker et al. work above this fray and describe a well-reasoned means of keeping the debate from having undue influence on the results.

The remaining four chapters deal with particular case studies. Like Baker's chapter, Ruegg's functions as a summary of her recent detailed research (e.g., Ruegg and Smith 2002, *Proc. Royal Soc. London* B 269:1375–1381; Ruegg et al. 2006, *J. Biogeogr.* 33:1172–1182; Ruegg et al. 2006, *Mol. Ecol.* 15:3147–3156; Ruegg 2008, *Evolution* 62:452–466) on divergence in migratory routes, ecology, behavior, voice, and genetics between russet-backed and olive-backed groups of Swainson's Thrush subspecies, which meet in a contact zone in western British Columbia. That these groups "reside in the interesting gray area between well-differentiated subspecies and recently diverged sister species" (p. 75) suggests that her system will be important to our understanding of avian speciation.

Cicero and Johnson's chapter tackles another putative contact zone, although a disputed one in this case (*cf.* Patten and Unitt 2002, *Auk* 119:26–35, and Cicero and Johnson 2006, *Auk* 123:266–274). Because I am a player in this controversy, I shall keep my comments brief and dispassionate. At issue is whether morphological variation is more or less smoothly clinal across the Mojave Desert and western Great Basin, as putative western and eastern subspecies differ solely in body size. Cicero and Johnson (2006) argued that our data were inappropriate because we included too many specimens that were not proven to be local breeders. I counter that discounting certain specimens, such as remarkably large birds taken in Tulare County, California, in July, well outside the species' known migratory schedule, biases results in favor of finding a step cline. Perhaps only uniformly spaced collecting along a transect through this region will settle the issue. Regardless, data presented on habitat use and genetic variation are fascinating and certainly point to the need for further study.

Monahan and Hijmans' contribution on range expansion of the Barred Owl and resultant hybridization with the Spotted Owl is thorough, so far as its geographic coverage allows. Like other such studies—e.g., on the Solitary Vireo (*Vireo solitarius* in the broad sense) complex (Johnson 1995, *Condor* 97:903–919)—the international border with Canada seems nonexistent while the international border with Mexico forms an impervious barrier. In this case we get the erroneous assertion that "the Mexican Spotted Owl (*S. o. lucida*) remains allopatric with the congeners" (p. 56), a statement ignoring the broad and apparently old zone of sympatry in central Mexico between *S. o. lucida* and the Barred Owl.

Indeed, given the interest in recent hybridization between the Spotted and Barred Owls, why has no researcher tried to determine the extent of their interbreeding in this part of Mexico? Still, this criticism in no way detracts from the depth of and care taken with their analyses. In addition to providing solid evidence of a natural cause for recent westward expansion of the Barred Owl, their findings that hybridization occurs across a broad range of environmental conditions, with "dispersal tendencies

that favor parental backcrossing" (p. 62), may spell further trouble for the Spotted Owl, as "one taxon ultimately is expected to replace the other two" (p. 63).

A similar mistake aside—the Wrentit, which ranges north to the Columbia River on the Washington/Oregon border, is not "mostly restricted to California" (p. 97)—the phylogeographic analysis by Burns, Alexander, Barhoum, and Sgariglia doubtless would have made Johnson proud. It is a fine addition to recent analyses (Calsbeek et al. 2003, *Mol. Ecol.* 12:1201–113; Lapointe and Rissler 2005, *Am. Nat.* 166:290–299) of the evolutionary history of diversification across the California Floristic Province. In all three species they examined, the timing of diversification was similar and, in agreement with the earlier studies, they found a strong phylogenetic break at the Transverse Ranges. This broad congruence was discovered even though "evolutionary history of each species was complex and characterized by a diversity of processes" (p. 102).

This monograph is generally well produced and thought provoking, even provocative. Rather than a criticism, this last trait is a strong point. Who wants to read commentaries, essays, or short review papers that cater only to one's own pet views? It may be consoling, even flattering, to have one's opinions "validated" in this manner, but scientific progress is made only when we are forced to confront and accommodate uncomfortable disagreements.

Michael A. Patten

Barefoot on Lava: The Journals and Correspondence of Naturalist R. C. L. Perkins in Hawai'i, 1892–1901, edited by Neal L. Evenhuis. 2007. Bishop Museum Press, Honolulu. 412 pages, 49 figures including black-and-white photographs, maps, and reprints of newspaper clippings and correspondence. Cloth. $29.95. ISBN 978-1-58178-061-1.

What do Alfred R. Wallace, Rollo Beck, A. J. van Rossem, Ed Ricketts, and Larry Spear have in common? They were all what we might call "scroungers," biologists who would much prefer to be in the trenches, bitten by sand fleas, at sea in a rowboat, parched and dusty in Mexican deserts, soaked and covered with seaweed, or hauling rotten whales down an interstate, respectively, rather than fraternizing with fellow biologists at conferences or meetings. In short, these are my heroes. Now I can add a sixth name to this list, Robert Cyril Layton (R. C. L.) Perkins.

The birds of Hawaii, and in particular the endemic landbird family Drepanididae, were largely "discovered" and classified during a flurry of collecting from 1887 to 1895. Two highly competitive British museums were vying for the right to discover and name the most new Hawaiian birds. The British Museum of Natural History (BMNH) and its respected but somewhat pompous ornithologist Alfred Newton sent Scott B. Wilson out to the islands to collect birds in 1887 and 1888. Wilson did a fair job, describing 14 new species and compiling (with Arthur H. Evans) the first of four classic publications on Hawaii's avifauna within four years, *Aves Hawaiienses*, completed in 1899.

But Wilson was often moody and disinterested (later, back in Britain, he committed suicide), and the BMNH lacked the funding to keep him in the field. Newton asked his former student, the well-funded but taxonomically challenged Lord Walter Rothschild, to collaborate on continued collecting, but Rothschild decided that he would prefer to fund an independent effort for his Natural History Museum in Tring, and he sent an Australian ruffian, Henry C. Palmer, to the islands from 1890 to 1893. Palmer wound up collecting 10 new bird species before he returned to Australia and was murdered while panning for gold. Rothschild summarized Palmer's discoveries in the second classic of the time, the curiously named *The Avifauna of Laysan and*

the Neighbouring Islands; with a Complete History to Date of the Birds of the Hawaiian Possessions, completed in 1900. Meanwhile, Newton and other distinguished British biologists and geologists formed the Sandwich Islands Committee and scraped together enough funds to send a single multi-talented collector to Hawaii from 1893 to 1897.

As much, if not more, an entomologist than an ornithologist, R. C. L. Perkins was able to combine insight gained from both insects and birds (e.g, dissecting the stomachs of his collected birds to see what they were eating) to form ecological perspectives on the Hawaiian fauna that the former collectors lacked. He was also the first to classify most drepanidids correctly and (despite Newton's skepticism) the first to suggest that they were all of one origin. Perkins ultimately published the fourth (Henry W. Henshaw produced yet another summary in 1902) and most comprehensive work on Hawaiian birds and ecology, *Fauna Hawaiiensis*, completed in 1903. Sadly, ecological disaster in the form of habitat destruction and introduced rodents, ants, and diseases destroyed much of Hawaii's fauna during and shortly after Perkins' time, so his observations are all that we have on the diet and habits of many species of birds, insects, and land snails, now extinct. Perkins saw what was happening and was also the first naturalist to press for conservation measures to try to avert the destruction of Hawaii's forest ecosystems.

Barefoot on Lava is a collection of journal entries and letters composed during Perkins' fieldwork in the Hawaiian Islands. Neil Evenhuis, an entomologist at the Bernice P. Bishop Museum, Honolulu, spent almost 10 years scrounging around in the archives of various museums to piece together a tapestry of Perkins and his colorful acquaintances during a colorful period in the colorful place that was Hawaii in the late 1800s. Through the book we obtain a complete snapshot of the triumphs, challenges, and travails that faced the pioneering collectors during this great era of biological discovery, along with the politics and funding issues facing their sponsors back in Europe.

Perkins' passion for his work pours through his journals. During a collecting trip to Moloka'i 11 May–29 June 1893 he spent almost every day slogging through mud, heavy rain, and near-impenetrable dwarf cloud forests from dawn to (at times) well after dark, often not eating for a day or two at a time, and camping in a leaky tent and shack. Yet he understated the difficulties and reported with satisfaction the discovery of every new insect or the collection of a fine bird specimen. His shining ornithological moment came during this trip, when he discovered the Black Mamo (*Drepanis funerea*) on 18 June. Newton and the other taxonomists were ecstatic about the discovery of this unique Hawaiian honeycreeper, but Perkins described the collocation of the first two specimens rather more matter-of-factly, dutifully finishing his daily journal with "I saw at once that I had no oo but a *Hemignathus* [Akialoa/Nukupu'u]-like creature with shorter lower mandible and excessively strong smell characteristic of the Drepanidae and of the Hawaiian finches. All of the feathers on the top of the skull of each were covered with a white sticky substance, apparently pollen of some flower, and they are, no doubt, honey-sucking birds. The cry is not of the loud character of the oo but is startlingly clear and could be heard at a considerable distance for this reason. I kept on some way but saw no other bird of note, just managing to reach the house by dark, probably a little after 7 p.m. Very tired. I got a few Carabidae under moss in the highest forest and some more large *Brachypeplus* under bark of the same tree as on the 15th. I shot several *Loxops* [Moloka'i 'Alauahio]." Perkins also gained an island-wide perspective during his many collecting trips, writing to his colleague Edward Poulton in 1897, "For these reasons (i) the birds of the islands are extremely specialized, so much so that many of them depend on almost a single species of insect or fruit for food. (ii) The only bird likely to eat the [insects] in question is [the 'Elepaio]. (iii) on one of the islands where no ['Elepaios] exist or even are likely to have existed [Maui] the insects tend to form a uniformity of colonizing

peculiar to that island." *Barefoot on Lava* is packed with Perkins' perceptive observations such as this, published for the first time, which will be essential to ornithologists and historical ecologists in understanding what Hawaii's forests were like before and during the initial stages of decline.

Those with a wider interest in taxonomy of the period will enjoy reading the letters of Newton and David Sharp (preeminent entomologist at the BMNH) back to Perkins, which reflect, in the delightfully succinct yet compendious writing style of the era, the respect that these two scientists had for the collector. Perhaps reflecting his personality, Sharp tended to be conservative in his communications, focusing on logistical matters and insect taxonomy, whereas Newton was much more loquacious, sharing his views on all sorts of subjects and gossiping about prominent ornithologists and other personalities working in Europe at the time. None of the seminal taxonomists of the era was spared an opinion: Darwin, Gray, Sharpe, Finsch, Sclater, Stejneger, Ridgway, Cassin, Peale. But Newton saved his wryest comments for Rothschild, whom he called "the Golden Walter," and referred derisively to the genus *Palmeria* as "*Poacheria*." [After Wilson first described the Crested Honeycreeper (as *Himatione dolei*), Rothschild redescribed it as *Palmeria mirabilis*, and the generic name remains as the first applied to this distinctive species.] Newton hated the practice of naming birds after people, several times indicating to Perkins that it was "abused" and an "insult," but we also gain more insight into his artful thinking on this subject when he proposed to Perkins, "what a fine joke it would be to send to the Hawaiian journal a note making a new genus *Rothschildia* for *D. funerea*. Its validity would never be admitted by anyone else, and the name as a generic term would be preoccupied for all future time!!!" Among many other gems from Newton are opinions about the scandalous affair of BMNH taxidermist William Ferrand, his views that giving degrees to women "does not much concern me as I am not likely to marry one because she is a B.A.ess," and his lamenting about BMNH's losing of type specimens with "the boasting of all concerned with that establishment is beyond belief." But we also see an endearing side to Newton, who supported Perkins fully by publishing his journals, giving him full reign of his time and schedule, advising him on how to avoid a serious cholera outbreak in 1895, and ever laboring to secure more funding to keep him in the field.

My only minor disappointment with *Barefoot on Lava* regards the appended material. A 16-page glossary is helpful but could have stood some proofreading, at least for the entries on birds, in which I found several typographical errors (the only ones I noticed in the book), errors of fact, and superfluous entries (e.g., for "pewee," hardly a Hawaiian bird!). This glossary is followed by a very brief bibliography, which, perplexingly, does not include any of Perkins' own published works. Perkins published at least five very perceptive papers on Hawaii's birds between 1893 and 1919, the last describing the Lana'i Hookbill (*Dysmorodrepanis munroi*) based on the single enigmatic specimen collected by his friend and colleague George Munro. He doubtlessly published much on entomology as well. Evenhuis should have completed the chapter on Perkins by including a bibliography and brief summary of each of his scientific contributions and at least mentioning the hookbill. These minor thoughts aside, I highly recommend Evenhuis' compilation to those interested not only in Hawaiian natural history but in the history of avian science and ornithological taxonomy during the turn of the 20th century.

Peter Pyle