by Paul Hess

A New "Pacific Wren"?

In Russia it is *Krapivnik*, in Poland it is *strzyżyk*, in Germany it is *der Zaunkönig*, in Britain it is the Wren. By whatever name, our Winter Wren is one of the most widespread songbirds, breeding in boreal forests around the world. Unresolved is how many species *Troglodytes troglodytes* represents.

At least two, in the view of David P. L. Toews and Darren E. Irwin. They recommend species status for western North America's *pacificus* subspecies group in a formal proposal to the American Ornithologists' Union North American Classification Committee (the "Check-list Committee") in 2009. The Committee's decision will be announced in the annual *Check-list* supplement in the July 2010 issue of *The Auk*.

The proposal stems from the authors' discovery of an area in northeastern British Columbia where both *pacificus* and the eastern North American subspecies *hiemalis* occur, even occupying adjacent territories. Toews and Irwin reported in 2008 that *pacificus* and *hiemalis* individuals sampled in the contact zone differ significantly in mitochondrial DNA, nuclear DNA, and song—and that the three characters are concordant in each individual tested (*Molecular Ecology* 17:2691–2705).

This **Winter Wren** of the *pacificus* subspecies in western North America merits full-species status in the view of researchers in Canada. They recently found that *pacificus* and eastern *hiemalis* populations do not interbreed in an area of northeastern British Columbia where the two co-occur. *Vancouver Island, British Columbia; November 2009. © Tim Zurowski.*

Wrens identified as *pacificus* and *hiemalis* by DNA consistently sang either a distinctly *pacificus* or a distinctly *hiemalis* song—each singing type corresponding to typical songs in western and eastern populations away from the contact zone. The differences are recognizable to the human ear, and they are quantitatively evident in the samples tested: *pacificus* higher in maximum and mean frequency, and faster in switching between relatively high and low notes. No significant quantitative differences emerged in length, minimum frequency, and percentage of silence between notes.

The call notes also differ between *pacificus* and *hiemalis*—a distinction the authors recognized but have not yet analyzed. Nathan Pieplow's "Earbirding.com" blog offers an instant guide to distinguishing both the calls <http://tiny.cc/s7Lg5> and the songs <http://tiny.cc/6uQh5>.

In the sampled birds, no statistically significant morphometric differences appeared in wing, tail, or tarsus length, or in bill length and width. Aspects of plumage pattern and color were not analyzed, but *pacificus* is recognized as more richly colored than *hiemalis*.

The authors conclude that the strong genetic and vocal divergence where *pacificus* and *hiemalis* are sympatric indicates that the two are "reproductively isolated to a high degree" and, thus, should be classified as distinct biological species. The only apparent hybrid detected was west of the contact zone studied. Toews and Irwin suggest that a key barrier against interbreeding may be the diagnostic difference in song, with females of each taxon selecting a mate based on his singing type.

Troglodytes pacificus would include the current *pacificus* subspecies and closely related western subspecies such as *salebrosus*. Toews and Irwin suggest the name Pacific Wren to reflect the new species' scientific name and geographical distribution.

Other researchers have found significant molecular distinctions among Winter Wrens around the world. In 2004 Sergei V. Drovetski, Robert M. Zink, Sievert Rohwer, and five associates reported "deep divergences" in mitochondrial DNA among population groups in six geographic regions: western and eastern North America, Europe, the Caucasus, and eastern and central Asia (*Proceed-*

ings of the Royal Society–B 271:545–551). These authors suggested that each group may deserve species status.

Toews and Irwin recommend that all other populations except the *pacificus* group remain classified as a single *T. troglodytes* species for now, but they speculate that future work may confirm additional cryptic species such as those Drovetski and his colleagues discussed.

Whither the Avian Hyphen?

The taxonomic hyphen is a waif in the ornithological world. Birders of a certain age can remember the Prairie Chicken, the Ground Dove, the Screech Owl, and the Wood Pewee. The names were simple, they seemed normal, and we supposed they would live forever. Now we know that they were merely chapters in a stupefying hundred-year history of off-and-on hyphenation.

Edwin W. Doran told the American Ornithologists' Union (AOU) in 1903 that "the whole subject of vernacular names ought to be put upon a scientific basis" (*Auk* 20:38–42). In fact, however, his basis had everything to do with rhetoric and nothing to do with science. For no scientific reason, he suggested "screech-owl" and "wood-pewee"—as well as "mocking-bird" and "dick-cissel." Doran's principles were both arbitrary and arcane. Take his Rule 3: "Write as a compound name...any two or more names or words in joint arbitrary use (road-runner, turnstone)." So, then, "road-runner," but "turnstone." Understand?

We who fail to understand are in good company. In that same issue (pp. 70–73), the distinguished *Auk* editor J. A. Allen called Doran's ideas "entirely contrary to present tendencies in American English." Very few of Doran's hyphens were accepted in the third and fourth AOU *Check-list* editions in 1910 and 1931. Official names remained a stylistic mishmash.

Finally, Alexander Wetmore, chairman of the AOU Committee on Classification and Nomenclature, asked William H. Cheesman and Paul H. Oehser to clean up the mess. Agreeing in 1937 that the nomenclature needed "a little dressing up for public inspection" (*Auk* 54:333–340), they advised deletion of many hyphens to produce Bobwhite, Canvasback, and Ovenbird. But they also suggested "chuckwillswidow." The fifth *Check-list* edition in 1957 did not include that monstrosity, but it did adopt most of Cheesman's and Oehser's minimal use of hyphens.

Then came Kenneth C. Parkes in 1978 with new guidelines designed for "almost complete consistency in the formation of compound names" (*Auk* 95:324–326). Most notable was a suggestion that names be hyphenated and both words capitalized for species belonging to a single taxonomic group—for example, Wilson's Storm-Petrel, Common Ground-Dove, and Eastern Screech-Owl. In contrast, Great Blue Heron and Little Blue Heron would have no hyphens because there is no group of closely related "blue-herons."

The Parkes system, thus, was meant to indicate close phylogenetic relationships. Seeming logical, it was adopted in the sixth *Check-list* edition in 1983—by the way, after inviting suggestions from the ABA Checklist Committee. Bombarded with other stylistic proposals, the AOU felt compelled to affirm its taxonomically based hyphens in 2007 (*Auk* 124:1472).

Now come Frank B. Gill, Minturn T. Wright III, Sally B. Conyne, and Robert Kirk in 2009 (*Wilson Journal of Ornithology* 121:652–655), explaining that "well-intentioned" hyphenations often represent phylogenetic relationships shown by newer research to be less close or less certain than previously believed. An example: Ground-dove species are not a single group but span six different genera. Another: Molecular studies have not resolved relationships among wood-pewees and 13 other species in the genus *Contopus*.

Seeing analogous problems in many other avian groups, Gill and his colleagues "prefer to follow plain, correct, and intuitive English, rather than to overload the orthography...

Rules for hyphenating birds' names have fluctuated wildly for more than a century in American Ornithologists' Union nomenclature. One of the wildest suggestions was an unsuccessful 1937 proposal to name **Chuck-will's-widow** "chuckwillswidow." *Bandera County, Texas; May 2006. © Alan Murphy.*

with phylogenetic inference through hyphens." Hyphenation style is one aspect of a much broader effort by the International Ornithological Congress to establish worldwide consistency in English names <worldbirdnames.org>.

As the hyphen's comings-and-goings continue with no consensus in sight, perhaps we can at least hope that the "chuckwillswidow" is extinct.

Trans-Gulf Migrants' Timing

Wells W. Cooke at the U.S. Biological Survey was a pioneering expert on North American bird migration, and his expertise is evident by an insight in 1904 (*Condor* 6:115–126). Cooke surmised that the timing of landbirds' spring arrival on the Gulf Coast relates to where they are traveling to breed.

His idea was that birds breeding in the southernmost area of a species' range arrive on the coast first, followed in turn by those nesting farther north. In the quaint style of his era, he suggested that northerly breeders "delay their migration, knowing that winter still holds sway in their summer dominions."

For several trans-Gulf migrant species, Cooke's supposition is affirmed a century later by a method he could not have imagined: analysis of stable isotopes in feathers. The ratio of the relatively rare hydrogen isotope deuterium to the ordinary hydrogen isotope varies systematically by latitude and longitude in North American rainfall, a pattern that persists in plants' chemistry and on up the food chain into the avian diet. This variation is useful for determining individual birds' long-distance movements and geographic origin—in this study, the latitudinal components of their migration and their breeding grounds.

Local isotopic "signatures" are incorporated into growing feathers. For those species of North American songbirds that molt on the breeding grounds, analysis of isotopes will reveal the region where a bird presumably nested.

Kathryn Langin and five colleagues applied the technique to 32 Black-and-white Warblers, 21 American Redstarts, 60 Ovenbirds, 44 Northern Waterthrushes, and 55 Hooded Warblers captured in coastal Louisiana during the spring of 2004. These species are known for breeding-site fidelity, so the birds were likely migrating to the same region where they had nested in the previous year.

When comparing the birds' arrival dates on the coast with the hydrogen isotopic composition of their tail feathers, the authors found highly significant correlations between arrival date and breeding latitude in Black-and-white Warblers, American Redstarts, and Hooded Warblers. Birds from the southernmost breeding populations were the first to arrive along the Gulf Coast, followed in turn by those headed farther and still farther north to breed.

The Black-and-white Warbler, the American Redstart, and the **Hooded Warbler** have a distinctive spring migration strategy. The farther north they nest, the later they arrive on the U.S. Gulf Coast, according to a recent analysis of hydrogen isotopes in individual birds' feathers. *Scioto County, Ohio; April 2004.* *© Robert Royse.*

In Ovenbirds a large-scale geographic trend was less apparent, although the most southerly breeding populations appeared to migrate through Louisiana first—a result consistent with the other species. But in the Northern Waterthrush the authors found no relationship between arrival timing along the coast and the isotopic composition of the feathers, despite the fact that relatively southern populations are known to arrive first on their breeding grounds. It is unclear what may cause this disparity. Perhaps populations have different rates of migration, or perhaps the isotopic composition of feathers does not reflect molting latitude in this species.

The findings published by Langin and her colleagues in 2009 (*Journal of Avian Biology* 40:309–316) take us back full circle to a different publication by Wells Cooke in 1888 (*U.S. Department of Agriculture, Division of Economic Ornithology, Bulletin No. 2*). A vast array of data in this 313-page treatise led him to suspect that migrants' northbound passage is timed to follow "the progress of vegetation and awakening of animal life...and the prospect for a plentiful food supply."

Cooke had no way of knowing the destination of the mi-

grants he observed, but his acuity is clear. Search "Report on Bird Migration in the Mississippi Valley" at <books.google.com> to see the immense set of records he compiled.

Long-billed Curlew Conservation

No one living today remembers Long-billed Curlews nesting as far east as Illinois. The state's last published breeding record was in 1873, according to Arthur Cleveland Bent's *Life Histories of North American Shore Birds*, at which time the species' range was already shrinking westward. By now, this spectacular prairie shorebird has vanished from the eastern third of its historical breeding range. It apparently continues to decline, particularly in the western Great Plains, according to a U.S. Fish and Wildlife Service *Status Assessment and Conservation Action Plan for the Long-billed Curlew* in 2009.

This biological technical publication by Suzanne D. Fellows and Stephanie L. Jones is a 98-page guide to current threats, necessary research, and recommended conservation management tools <library.fws.gov/BTP/long-billedcurlew.pdf>. The curlew's status in its breeding range, migration stopover areas, and wintering grounds in Mexico is evaluated in extensive detail for every state and province where it occurs. The goal is not simply to halt the decline but to reverse it, if possible, for a species listed as "highly imperiled" in both the U.S. and the Canadian shorebird conservation plans.

Priorities for action start with better monitoring of the population trend. Estimates of the population size itself have been controversial. The new publication emphasizes a 2004–2005 range-wide breeding-season survey covering 16 states and three provinces, which estimated an average population of 161,000 breeding individuals across the two years, but with large statistical variation around each year's estimate. Although this number is higher than previous assessments, the authors view the documented and suspected declines in many regions as alarming.

A second critical priority is habitat assessment and management. Where native short-grass and mixed-grass prairie remains, the curlews prefer it. Loss of native prairie has harmed the Long-billed Curlew more than any other factor. Where the natural prairie is gone, effective management is challenging because alternative microhabitats differ locally. Furthermore, habitats used in one area may be avoided in another. Fellows and Jones summarize the situation in four words: "Generalization may be meaningless."

The individual state and provincial analyses by experts in their localities indicate that curlews have considerable flexibility in their use of non-native breeding habitats. To varying degrees in various areas, these habitats include cultivated croplands, fallow and stubble fields, heavily grazed pastures, moist and dry meadows, even golf courses, and—most ironically—sometimes cheatgrass, which is typically condemned from an avian conservation viewpoint as a dreaded exotic plant. The report shows clearly that a one-size-fits-all approach to management is inappropriate.

Components of the full strategy are, thus, extraordinarily diverse. Specific actions recommended during the breeding, migration, and wintering cycles include 18 for population monitoring and assessment, 17 for habitat assessment and management, 13 for research, and one for education and outreach. It is an ambitious plan.

Fellows and Jones summarize the assessment with a broad statement of purpose: "We believe that the conservation of this unique and amazing species should continue to be a high priority throughout the continent."

A shrinking range and a declining population make the **Long-billed Curlew** a prime candidate for conservation action. A new U.S. Fish and Wildlife Service status assessment recommends a wide variety of management efforts to reverse the trend. *Cascade County, Montana; May 2006. © Brian E. Small.*