THE PERVERSIVE INFLUENCE OF TED PARKER ON NEOTROPICAL FIELD ORNITHOLOGY

J. V. REMSEN, JR.,¹ AND THOMAS S. SCHULENBERG²
¹Museum of Natural Science, Louisiana State University, Baton Rouge, Louisiana 70803, USA, and
²Environmental and Conservation Programs, Field Museum of Natural History, Roosevelt Road at Lake Shore Dr. Chicago, Illinois 60605, USA and Conservation International, 2501 M Street NW, Suite 200, Washington, D.C. 20037

ABSTRACT.—Ted Parker died in August 1993 at age 40, in an airplane crash while conducting aerial assessments of threatened habitats in Ecuador. Parker’s two decades of work in the Neotropics strongly influenced many field ornithologists. Although he published numerous papers, the majority of his data and many of his ideas were never published. Through example, conversations, and extensive correspondence, he directly influenced the methodology and conceptual orientation of many others. We summarize his major discoveries and highlight his primary themes, particularly the importance of knowledge of (a) bird vocalizations for faunal surveys, and (b) voice, habitat, and foraging behavior for systematics. His Rapid Assessment Program, sponsored by Conservation International, was a landmark approach for conservation biology.

RESUMEN.—Ted Parker murió en agosto de 1993, a la edad de 40 años, en un accidente de aviación mientras realizaba una evaluación aérea de los hábitats amenazados en el Ecuador. Las dos décadas de trabajo del Sr. Parker en el Neotrópico influenciaron fuertemente a muchos ornitólogos de campo. Aunque él publicó numerosos artículos científicos, la mayoría de sus datos y muchas de sus ideas nunca fueron publicadas. Mediante su ejemplo, sus conversaciones, y su extensa correspondencia, él influyó directamente la metodología y orientación conceptual de muchos otros. Resumimos sus mayores descubrimientos y resaltamos sus temas primarios, en particular la importancia del conocimiento de (a) las vocalizaciones de las aves en los levantamientos de fauna, y (b) la voz, el hábitat y el comportamiento alimentario en la sistemática. Su Programa de Evaluación Rápida, patrocinado por Conservation International, marcó un hito en la manera de enfocar la biología de la conservación.

"Walking through South American forests with Ted Parker, I found myself agreeing with the superlative opinions I had heard expressed about him. Of all the highly skilled field ornithologists I have accompanied, he was the most impressive."

(Gell-Mann 1994:334)

Ted Parker died after the plane in which he was conducting aerial reconnaissance for Conservation International crashed in a remote area in western Ecuador on 3 August 1993. Three others died in the accident, including botanist Alwyn Gentry (see Hurlbert 1994) and Ecuadorian conservationist Eduardo Aspiazu. Parker’s death was a tremendous personal tragedy to his family, his fiancée Jaqueline Goerck, and legions of friends. His death also was a devastating tragedy for Neotropical ornithology and conservation. Our goal is to outline his major accomplishments and to show how he influenced research on Neotropical birds. Because we focus on his scientific contributions, we provide only minimal details on his personal background. For more comprehensive information, see the tributes and memorials published after his death (e.g., Emanuel 1993; Kaufman 1993; Myers 1993; O’Neill 1993; Remsen 1993; Stevens 1993; Zimmer 1993; Anon. 1994; Forsyth 1994; Jammes 1995; Foster 1995; Call 1995; Muth 1995; Schulenberg 1995; Bates and Schulenberg 1997; Robbins et al. 1997). An issue of Bird Conservation International (Schulenberg and Call 1995), with 15 research papers in his honor, was dedicated to his memory.

During his childhood in Lancaster, Pennsylvania, Ted showed an exceptional aptitude for learning natural history information. Encouraged in his studies by his parents and brother Blanford, and assisted by the local bird-watching community (especially Harold Morrin), Ted had
already accumulated a thorough knowledge of North American birds (and of many other animal groups) by the time he was a teenager. During his final year of high school, he set a new national record for the number of bird species seen in North America in a calendar year (Parker 1972).

As an undergraduate at the University of Arizona, he assimilated the details of the region's ornithology so quickly that he became a regional editor for *American Birds* (Parker 1973a, b, 1974a, b) and a member of the Arizona bird records committee (Speich and Parker 1973), positions typically reserved for long-time residents rather than youthful newcomers. He also gathered data on sparrow populations and habitat preferences for H. R. Pulliam that led to two major papers on bird ecology (Pulliam 1975; Pulliam and Parker 1979).

At the same time, Ted began to explore the tropics of Mexico, using Tucson and the influence of its many naturalists as a launching pad. His circle of naturalist friends in Tucson included Susan Allen, Steven Hilty, Peter Hubbell, Terry Johnson, Kenn Kaufman, Andy Mack, Mark Robbins, Jim Silliman, Steve Speich, Doug Stotz, and Allan Zimmerman. Often with them as his companions, Ted made 22 trips to Mexico from 1972 through 1974, lasting from one to four weeks each and covering virtually every state in the country.

In 1974, Steve Russell and Jim Stewart persuaded George H. Lowery, Jr., of the Museum of Zoology at Louisiana State University (LSU), to include Ted on an LSU expedition to Peru. Parker had already memorized the names, both English and scientific, and distributions of all South American birds, without having set foot there. His extraordinary talents at bird identification were quickly recognized by Lowery and John P. O’Neill, both of whom encouraged Ted to continue his association with LSU. From then on, Ted was a frequent participant on LSU expeditions. Ted’s association with LSU helped catalyze a life-long passion for South American birds, especially those of Peru. From 1974 to 1990, he participated in 17 expeditions, lasting 1–7 months each and totaling approximately 47 months, to Peru, Bolivia, and Panama. His first technical paper on the birds of Peru (O’Neill and Parker 1976) appeared when he was only 23 years old. Despite spending most of his college years in Peru or Mexico, Ted earned a Bachelor’s degree in Anthropology from the University of Arizona in 1977 and then moved to LSU and Baton Rouge. Although Ted considered becoming a graduate student, he believed that he could accomplish more by opting for a “research associate” affiliation that would let him spend as much time as possible in the field. The standard quip was that . . . “Ted wasn’t going to let class work interfere with his education.” Ted supported himself during this period by leading more than 50 birding tours, primarily for Victor Emanuel Nature Tours, for whom he helped establish a strong South American program; these trips also enabled him to visit many new areas in the Neotropics. In 1990 he accepted a full-time position at Conservation International as Senior Scientist and Director of the Rapid Assessment Program, but maintained close ties to LSU.

Part of Parker’s influence on Neotropical ornithology was through his writing. Although only 40 when he died, Ted had published 47 papers on Neotropical birds in technical journals, as well as five Rapid Assessment Program monographs, four audio-cassettes, and seven popular articles (see complete bibliography following Literature Cited). He also wrote an annotated checklist of the birds of Peru (Parker et al. 1982), co-authored the ICBP Red Data book on threatened birds of the Americas (Collar et al. 1992), and was a key collaborator on a major work on the ecology and conservation of Neotropical birds (Stotz et al. 1996). This level of productivity was exceptional for one without a degree in biology and for one who was in the field roughly six months of every year. Nonetheless, Ted was frustrated not to have published more. Only a small fraction of Parker’s ideas and factual discoveries actually appeared in print.

Much of Ted’s influence on Neotropical field ornithology was not through his publications as much as his personal interactions with other naturalists, from lengthy correspondence to all-night conversations. It was during these intense discussions that Ted outlined his ideas and philosophy with characteristically persuasive arguments, charm, and passion. His enthusiasm was inspirational and contagious. One of Ted’s greatest gifts was his ability to make other people see the potential, and to find excitement in, the projects or research in which they were involved. Many ornithologists who had such experiences with Ted were influenced profoundly and modified their research outlook and methodology accordingly. His influence was particularly over the staff and students at LSU. Besides the authors, those at LSU during Ted’s tenure who published on tropical bird biology were: John M. Bates, Michael J. Braun, Robb T. Brumfield, Donald W. Buden, Angelo P. Capparella, Steven W. Cardiff, Angela Chapman, R. Terry Chesser, Mario Cohn-Haft, Guy Cox, Tristan J. Davis, Donna L. Dittmann, J. William Eley, Mary C. Garvin, John A. Gerwin, Gary R. Graves, Shannon J. Hackett, David H. Hunter, Nedra J. Klein, Robert S. Kennedy, Andrew W. Kratter, Scott M. Lanyon, Gary D. Lester, Curtis A. Marantz, Manuel Marín A., Peter P. Marra, Paul McKenzie, John J. Morony, David C. Moyer, John P. O’Neill,
David N. Pashley, A. Townsend Peterson, Carlos E. Quintela, Mark B. Robbins, Gary H. Rosenberg, Kenneth V. Rosenberg, Peter E. Scott, T. Scott Sillett, Daniel A. Tallman, Erika J. Tallman, Francisco J. Vilella, David A. Wiedenfeld, Morris D. Williams, and Robert M. Zink. The list of persons similarly influenced beyond LSU would be enormous and would include, just as a start, all authors in this volume.

The breadth and depth of Ted’s experience in the Americas was remarkable for someone so young. Localities from his field trips (Figs. 1 and 2) illustrate his thorough coverage of the hemisphere. From 1974 to 1993, he spent a total of approximately 115 months (9.6 years) in the field in the Neotropics, or roughly six months per year, and visited 22 countries. Thus his field experience was incomparable among contemporaries, and of historic proportions.

Parker had the ability not only to remember facts accumulated during field-work but to integrate them into an overall picture. He knew the habitat, voice, and foraging behavior of nearly all 4,000+ species of New World birds. Particularly after he began collaborating regularly with Robin Foster and Al Gentry during their work for Conservation International, Ted learned a great deal about tropical plant communities. The breadth of Ted’s knowledge, combined with a questioning mind and a rare talent for synthesis, allowed him to see patterns that no one else had seen or could detect. His insights often amazed and intimidated academic ornithologists. Original ideas, difficult to generate for most of us, flowed from Ted. When his colleagues discovered something that Ted had not already realized, from natural history anecdote to general pattern, they regarded it as a major triumph. Mixed with the tragedy of his death is that he had just begun to put his ideas in writing, and many of these were buried in papers with titles that did not reflect the ideas contained. Most of the facts are in his book on Neotropical birds (Stotz et al. 1996). Parker was primarily responsible for the database in this book, a massive matrix of 3,751 species by 47 variables (e.g., habitat, elevational range, guild) for each species—or roughly 175,000 data entries. However, most of the original ideas concerning the patterns revealed by these data had not been written down at the time of his death.

Ted had superior hearing abilities. He became the expert on Neotropical bird voices by combining this natural talent with hard work. He recorded thousands of individual birds, lugging heavy recorders and awkward microphones everywhere, often through rugged terrain and in predawn darkness. He spent countless hours studying his recordings of bird vocalizations. Ted’s
more than 15,000 cuts represented approximately 25% of all recordings at the Library of Natural Sounds at the Cornell Laboratory of Ornithology as of 1994 (G. F. Budney, pers. comm.). Ted, who served on the Lab’s Administrative Board, also recruited many other recordists to contribute their tapes to the LNS. These contributions, both direct and indirect, were instrumental in shaping the LNS into the world’s largest sound library.

To put Parker’s expertise in proper context, consider that when he started taping to identify South American birds by voice, only a handful of pioneers had begun recording Neotropical bird voices. Few records and no audiotapes of Neotropical bird sounds were then available. Likewise, published descriptions of the voices of most Neotropical species did not exist; indeed, the voices of most Neotropical birds were unknown. Few field guides were available to help
even with visual identifications. Ted learned largely by first recording the voice and then collecting voucher specimens to insure that his identification was correct; therefore, his specimens and tape-recordings are doubly valuable.

On LSU expeditions, Parker prepared roughly 2,750 bird specimens and collected many hundreds more that were prepared by others. Almost all his specimens are housed at the Museum of Natural Science, LSU; a few are at the Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Peru, and the Museo Nacional de Historia Natural, La Paz, Bolivia. The following taxa have been named for Ted: a genus of cardinaline grosbeak (Remsen 1997); the Ash-throated Antwren, *Herpsilochmus parkeri* (Davis and O’Neill 1986); the Subtropical Pygmy-Owl, *Glaucidium parkeri* (Robbins and Howell 1995); a species of *Cercomacra* antbird (Graves 1997); a species of *Scytalopus* tapaculo (Krabbe and Schultenberg 1997); a species of *Phylloscartes* tyrannulet (Fitzpatrick and Stotz 1997); a subspecies of the Coppery Metaltail, *Metallura theresiae parkeri* (Graves 1981); a species of carabid beetle, *Batesiana parkeri* (Erwin 1994); and a species of chewing louse, *Furnariphilus parkeri* (Price and Clayton 1995). Parker described the following bird taxa: *Schizoeaca fuliginosa plengei* and *Uromyias agraphia squamigera* (O’Neill and Parker 1976); *Pipreola riefferii tallmanorum* and *Chlorospingus ophthalmicus hiaticolus* (O’Neill and Parker 1981); *Grallarica ochraceifrons* (Graves et al. 1983); *Thryothorus eisenmanni* and *Thryothorus euophrys schulenbergi* (Parker and O’Neill 1985); new subspecies of *Myrmoborus leucophrys* and *Phrygilus alaudinus* (O’Neill and Parker 1997); and a new species of *Tolmomyias* (Schulenberg and Parker 1997).

Ted’s influence can be seen in seven major areas:

1. **Importance of thorough knowledge of vocalizations for surveying tropical bird communiti es.** Everywhere Ted went, he proved that knowledge of bird distribution, particularly tropical bird distribution, was incomplete until sampled by someone skilled in voice identifications. He showed that few tropical bird communities had been thoroughly surveyed and that even at well-studied localities, common species had been overlooked. Others before him had, of course, recognized the importance of vocal identification, but no one else dramatized and communicated more broadly its importance. Perhaps the best example was Ted’s visit to the Cocha Cashu study site in Peru’s Manu National Park, where John Terborgh’s team of competent ornithologists had been studying the birds for more than a decade before Parker’s visit. In only a few weeks, Ted added 20 species to what was already the most thoroughly studied tropical forest locality in the world. Among Parker’s discoveries was the Rufous-fronted Antthrush (*Formicarius rufifrons*), known from just two female specimens until he found it at Manu by hearing and then tape-recording an unfamiliar antthrush song (Parker 1983).

Parker’s knowledge and skill allowed him to detect an undescribed species by voice and to know that it had to be an undescribed species before he collected it. In 1983 at his Sucusari study site in Peru, Parker heard an unfamiliar *Tolmomyias* flycatcher. Knowing the voices of all other species in the genus, Ted knew that this was certainly a new species (Schulenberg and Parker 1997). Adding to the novelty was that it was not discovered at some remote or previously unvisited locality but on the banks of the Napo River near Iquitos, just the kind of river-bank locality most accessible to, and frequently visited by, ornithologists for more than a century. It was the Amazonian equivalent to discovering a new species of bird from the side of an interstate highway. This discovery by Ted was a focal point of Stap’s (1990) book, which received many enthusiastic reviews (e.g., Plimpton 1990).

Parker showed repeatedly that by knowing their voices, species thought to be rare and local were often actually common and widespread, from inconspicuous canopy tyrannids such as White-LOred Tyrannulet (*Ornithion inerme*; Parker 1982) to large, unmistakable birds like Nocturnal Curassow (*Nothocrax urumutum*; Parker, in press). He teased us all mercilessly when we presented him our tape-recordings from areas we had visited—“Now,” he’d say, “I can find out what was really there.” One of Ted’s most frequent sermons was that any tropical bird species not prone to frequent mist-net capture was much more common than recent literature indicated. All this led to his influential commentary on the overwhelming importance of knowledge of voices in surveying tropical birds (Parker 1991).

2. **The importance of voice in determining taxonomic relationships.** As Parker accumulated an encyclopedic knowledge of the songs and calls of Neotropical birds, the patterns of relationship that they often revealed became evident. For example, the plantcutters were considered a separate and distinctive family, the Phytotomidae, until Parker noted how similar the voices of plantcutters were to those of *Ampelion* cotingas. Subsequently, Lanyon and Lanyon (1989), using biochemical and morphological characters, found that the plantcutters and *Ampelion* were sister taxa. Likewise, Parker predicted from voice that “*Synallaxis*” *gularis* did not belong in that
species' biogeography. Ted discovered not only that many bird species were restricted to the
different lineages but that these lineages were not each others' closest relatives. Rosenberg's (1990) genetic study indicated that these two groups indeed represented not only
leaves suspended above ground (Remsen and Parker 1984), and those that did not. Hackett and
Parker encouraged them to work out the details (e.g., Kratter 1997).

examples. Although many such examples were mentioned briefly in his papers, the vast majority
of them remained in Parker's head, although he alerted many of his colleagues to them and
Parker encouraged them to work out the details (e.g., Kratter 1997).

3. The importance of foraging behavior in taxonomic relationships. Parker watched birds with
an exceptional eye for detail, particularly with respect to foraging behavior. He synthesized the
details of foraging behavior into patterns that he believed often revealed phylogenetic relation-
ships. For example, Ted recognized that the antwren genus Myrmotherula with its 30 or more
species, contained at least two distinctive species groups: those that persistently foraged in dead
leaves suspended above ground (Remsen and Parker 1984), and those that did not. Hackett and
Rosenberg's (1990) genetic study indicated that these two groups indeed represented not only
different lineages but that these lineages were not each others’ closest relatives.

4. The interrelationship between foraging behavior and habitat selection in understanding a
species' biogeography. Ted discovered not only that many bird species were restricted to the
vicinity of bamboo thickets but also that these birds often had specialized foraging behaviors
associated with features of their special habitat (Parker 1982). Such compound specialization
explained their restricted geographic distributions. Similarly, Parker (1981) pointed out that Poly
lylepis woodland, which occurs in tiny relictual patches in the Andes high above cloud-forest
elevations, supports several bird species restricted to this woodland, and that some of these
species have specialized foraging behaviors or diets that explain this restriction.

5. The importance of general natural history knowledge. Ted's involvement with professional
ornithology coincided with a period of dramatic increase in the emphasis on theoretical and
quantitative aspects of avian ecology and systematics. Although Parker's limited background in
mathematics prohibited him from active involvement in such analyses, he was nonetheless deeply
interested in conceptual issues. Ted was greatly dismayed, however, by his perception that an
increasing proportion of researchers and students devalued general natural history knowledge.
He was alarmed by encounters with students and professors who were more interested in which
statistical tests were appropriate for their data analyses than in the basic biology of their study
organisms. He delighted, therefore, in pointing out errors generated by ignorance of natural
history that he found in publications, and how better knowledge of the bird's natural history
would have changed their design or interpretation. One mistake that he often ridiculed, in part
because it was so prevalent in Neotropical ornithology, was equating differences in mist-net
capture rates with differences in relative abundance, without taking into account the radically
different movement and spacing patterns that make some species much more prone to capture
(Remsen and Parker 1983). Fortunately, it is once again becoming a popular theme that extensive,
accurate knowledge of natural history is at the core of good science and good scientists (e.g.,

Parker's species accounts in his many papers on natural history of Neotropical birds set the
standard for a generation of field ornithologists. When composing our own accounts of little-
known species, we modeled them after Ted's accounts and revised them from the viewpoint of
"what would Ted say?"

6. The importance of voice, foraging behavior, and habitat in field identification. Field identi-
fication of tropical birds, especially those of forests, is notoriously difficult. Parker greatly
influenced the field skills of a generation of Neotropical field ornithologists by insisting that
subtle differences in plumage, criteria that have received increasing attention among experts in
the Northern Hemisphere, were nearly useless as field marks in most tropical habitats. He
preached instead the importance to field identification of knowing not only voice but also for-
aging behavior, posture, habitat, and microhabitat—in other words, everything about the way a
bird behaves in life, not just a narrow view of "what it looks like." His seminal paper on foliage-
gleaner identification (Parker 1979) revolutionized the manner in which many of us approached
field identification. As the reigning expert on Neotropical field identification, Parker was besieged
by people who sent him detailed descriptions of plumages, accompanied by proposed identifi-
cations, often of species that would never occur in the regions, habitats, or microhabitats where
When such descriptions were accompanied by notes on voice and behavior, Parker usually could point out the correct identification.

7. Tropical conservation requires rapid assessment programs. Ted left an indelible imprint on Neotropical conservation. He had three special talents that were the key elements of his influence. First, his comprehensive knowledge of Neotropical birds and his genius for synthesizing this knowledge into patterns gave him a unique overview of their conservation status. Second, his extraordinary ability at bird identification allowed him to survey avifaunas more rapidly and more accurately than anyone previously imagined. Third, Ted was charming. From campesinos living next to parks, to Nobel scientists, to movie stars with funds to donate, to presidents of countries, they all loved talking with him, because they could tell he was well-informed and passionate about his beliefs. Finally, unlike many scientists, Ted was willing to become involved.

These ingredients were all essential to Ted's innovative conservation program, the Rapid Assessment Program (RAP), which he designed and directed for Conservation International from 1989 until his death. The RAP design was to assemble a team of world experts on the field identification of organisms, such as birds, whose conservation status could be assessed and then to survey these groups in the target region over a relatively short time, usually about one month. The RAP team members then analyzed their survey data to evaluate the region's importance to Neotropical conservation (Parker and Bailey 1991; Parker and Carr 1992; Foster et al. 1994; Parker et al. 1993a; Parker et al. 1993b; Parker et al. 1993c). Under RAP protocol, it could take less than a year from when the survey was completed to formal conservation recommendations to those in power. This was indeed rapid compared to traditional approaches.

Consequently, Ted's Rapid Assessment Program rankled some mainstream conservation biologists, who preached that a proper inventory should be more thorough and should include the entire biota, not just a few well-known taxa (see Roberts 1991; Abate 1992). Ted privately labeled this criticism the "what-about-the-nematodes" approach. He of course agreed that a more thorough inventory would be better, and nothing would have pleased him, the-all-around-naturalist, more than a complete survey of the biota, nematodes and all. But Ted knew that tropical habitats would be all but gone by the time traditional inventories were conducted, by the time all those species of nematodes were properly identified, and so he argued for concentrating on those indicator organisms that can be identified most efficiently and whose conservation status can be assessed.

So, the RAP team shrugged off criticism, generated tremendous publicity for conservation in the popular press (e.g., Booth 1990, Germani 1990, Conniff 1991, Wolf 1991, Lipske 1992, Reed 1992, Churchman 1993), and accomplished so much so quickly that soon many other conservation organizations were talking about creating their own RAP versions. A photo of Parker in action for the RAP team has already appeared in at least one general biology text (Solomon and Berg 1995). RAP is clearly Ted's most important legacy for conservation.

That Ted accomplished what he did should inspire all young ornithologists. Ted showed what can be accomplished, with minimal academic credentials, by total dedication to learning and by publishing his findings in technical journals. We can only wonder what he would have accomplished had he had 80 years, instead of 40. Ted Parker has already influenced a generation of young ornithologists here and in Latin America. They are now doing fieldwork in the Parker tradition, and hopefully they can help make up for the 40 years we didn't get. We have tried to capture the essence of Ted Parker's influence by quantifying it and reducing it to facts and categories. We believe, however, that this approach of describing the whole by listing its parts fails to portray the true strength and pervasiveness of his influence in Neotropical ornithology, in part because Parker's charisma, so obvious to those who knew him, cannot be captured adequately by words alone.

Although we have attempted to be as clinical as possible in our assessment of Parker's influence, we cannot end without noting what is well known to all who knew Ted, namely that he was loved by many and considered a close friend by hundreds of ornithologists, birders, naturalists, and conservationists. He gave his time enthusiastically to help and encourage hundreds of people, from prominent scientists to beginning students. Now it remains for those of us influenced by Ted to make the most of what he taught us.

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(see also Parker bibliography below)

PARKER INFLUENCE ON NEOTROPICAL ORNITHOLOGY


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