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Neotropical Birds of Prey: Biology and Ecology of a Forest Raptor Community

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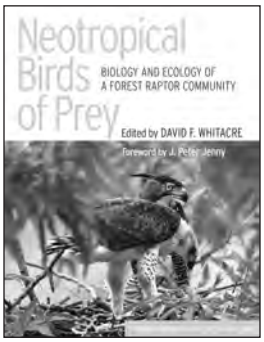
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Researching Raptors among the Ruins

Neotropical Birds of Prey: Biology and Ecology of a Forest Raptor Community. David F. Whitacre, ed. Cornell University Press, 2012. 412 pp., illus. $75.00 (ISBN 9780801440793 cloth).

The ancient forests of Tikal, in northern Guatemala, hold many secrets. Crumbling pyramids rise from the tangle of vegetation and carved figures, and hieroglyphs etched in stone speak of the once-thriving Mayan civilization, with its animals and animal-like deities, raptors among them. It was against this evocative setting, lured by the possibility of a sighting of the much-sought-after orange-breasted falcon nesting on the ruins, that the late Bill Burnham, former president and chief executive officer of The Peregrine Fund, and J. Peter Jenny, its current president, began the Maya Project. Thanks to generous donations to The Peregrine Fund, this project became a 9-year (1988–1996) study documenting the ecology, habitat, and spatial needs of the core raptor community of Tikal National Park—20 species of forest-dependent birds of prey, including two owls. *Neotropical Birds of Prey: Biology and Ecology of a Forest Raptor Community* is the final product of the project.

This substantial book is edited by David F. Whitacre, the field director of the Maya Project from 1991 to its completion. The book begins with a foreword by Jenny, followed by two introductory chapters, the first of which gives an overview of the project that includes the statistical methodology and an explanation of the tailoring of a suite of field-study techniques to suit the somewhat-novel conditions. Observation points established atop the ruins and high in emergent trees, broadcasts of taped calls of the target birds and their prey, traps set at nests, and radio tracking were among the techniques adopted. The second chapter examines the study area by offering a paleohistory of the lowland deciduous forest and its raptors, the climate and seasonality, and the great diversity of flora and fauna.



The research was not easy. Most of the target raptors were rarely seen, and when they could be glimpsed, they were soaring above the rainforest in the breeding season. The habitat was challenging, the climate uncomfortable. The information gained was hard won, but the rewards were great, considering that so little was known at the start of the project. Graduate and undergraduate researchers teamed up with local Guatemalans (with little or no formal education) to contribute thousands of hours in the field. The knowledge and skills of these Guatemalan employees proved to be invaluable, and they are either listed as authors or acknowledged in the book. One legacy of The Peregrine Fund's Maya Project is that it trained many of these young Guatemalans to be scientists.

Twenty-five of these dedicated researchers are the contributors to the next 20 chapters, in which the main results of the project are reported, species by species. Their accounts cover each bird's geographic distribution, morphology, diet and hunting behavior, habitat use and abundance, breeding, vocalizations, population density, and conservation status. Each chapter begins with a charming anecdote or an observation to give the reader a sense of the bird and ends with unique highlights about the species.

Among the more impressive accomplishments of the project was the location of 70 nests of the barred forest falcon (*Micrastur*), whose nests and eggs had never previously been described, despite the species' being among the most common of the forest raptors at Tikal. Indeed, prior to the project, the eggs of only one other of the seven species of *Micrastur* had been found. All seven species are secretive, crepuscular, and nest in tree cavities high in the forest.

As an Australian, I chuckled at the book's comparison of the laughing falcon with the laughing kookaburra. The case is made that both are tropical, eat reptiles, are masked, and have laugh-like vocalizations. In actuality, the kookaburra—a kingfisher—is more temperate than tropical, it famously captures snakes but is not a reptile specialist, and its call is a rollicking *kook-kook-kook-ka-ka-ka* (from which it gets its name). A more meaningful comparison might have been made with the brown falcon, which catches more snakes than any other Australian falcon does and has a chuckling, cackling call.

The final chapter of *Neotropical Birds of Prey* brings the threads of data together to reveal community patterns. Comparisons of species diversity and feeding habits are made with (temperate-climate) North American raptors, which highlight the general trends of high diversity, relatively high adult survivorship, low fecundity, and extended parental care among the birds of the wet tropics.

One way in which Neotropical raptors share the forest is through prey specialization—examples include the wasp-eating gray-headed kite, the snail-eating hooked-billed kite, the insect- and

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small-bat-eating black-and-white owl, the frog- and lizard-loving roadside hawk, and the double-toothed and plumbeous kites that feed on small animals flushed by troops of monkeys. Another way is with varied hunting times and techniques—the crane hawk, with its specialized double-jointed legs and small head, delves into cavities after nocturnal animals; the black hawk-eagle hunts nocturnal, arboreal mammals, including bats. As the book suggests, far more niches are available to raptors in the wet tropics than in temperate areas.

Adding to the book's interest are the two-dozen color plates illustrating the raptors, their habitat, and some of their prey. Images of the rarely photographed ornate hawk-eagle (on the cover), barred forest falcon, and Mexican wood owl are particularly striking. Many maps, tables, and graphs also illustrate the research.

The book's strength lies in its thorough collation of basic biological data from the project and the general literature. The tables and appendices are packed with data that include the mass, morphometrics, diet, habitat, and hunting methods of many of Tikal's reptiles, amphibians, and mammals, as well as those of the raptors. (An extensive bibliography includes more recent research.) I would have liked to have seen a table summarizing the reproductive parameters for all of the bird species in the study, however. Arguably, the most important outcomes of the project are the results of the project's telemetric work, which will be a boon to conservationists. With tropical forests being felled, often illegally, at an alarming rate (more than 3 percent per annum in Guatemala), this sound knowledge of the spatial needs of Neotropical raptors will prove indispensable to preservation efforts.

Neotropical Birds of Prey is a handsome tribute to an ambitious project. Not least, the book captures the dedication required to squeeze a decent set of data out of *any* suite of raptors—a notoriously difficult group to study—much less those of the remote, dense, and humid Tikal forest, with its heavily armed plants, aggressive insects, and venomous snakes.

PENNY OLSEN

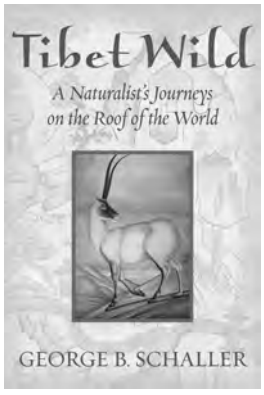
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ADVENTURES ON THE ROOF OF THE WORLD

Tibet Wild: A Naturalist's Journeys on the Roof of the World. George B. Schaller. Island Press, 2012. 384 pp., illus. $29.95 (ISBN 9781610911726 cloth).

To conduct field biology requires tenacity, grit, and flexibility; to endeavor to achieve conservation success requires patience, persistence, and passion. The essence of field biology and the hope for conservation success are both reflected admirably in George B. Schaller's most recent book, *Tibet Wild: A Naturalist's Journeys on the Roof of the World*. I can think of no living biologist who embodies these characteristics more than Schaller does. Nearly 80 years old, he still regularly treks in faraway lands, observing and recording the natural history of species that the vast majority of us will never see in the wild. Schaller is a vanguard, and *Tibet Wild*, like his other books, is a sentinel of urgent conservation need.

In Schaller's words, "this book is part observation and part evocation" (p. 14). It contains 14 chapters, 8 of which are focused on the Chang Tang in "the great northern plain" of the Tibetan Plateau (p. 2) and on his decades-long quest to discover the calving grounds of his beloved chiru (*Pantholops hodgsoni*)—a small, enigmatic antelope unique to the plateau that once numbered in the millions but was severely overharvested for its exceptionally fine coat. After 26 journeys on the Chang Tang, beginning in 1984 and totaling 41 months, Schaller no doubt has more insight into the area's biology and character than does any other naturalist. Other chapters summarize Schaller's notable travels and observations in the Pamir Mountains (he calls them the plateau's "veranda" to the west) and the "Hidden Land of Pemako," characterized by the "Yarlung Tsangpo Great Canyon" (p. 227), which falls quickly off the eastern side of the plateau "from mountain coolness… into a humid heat of wild bananas and leeches, along a narrow cliff trail through a gorge with a river rumbling below" (p. 230).



Schaller's pattern is to publish books in pairs: the scientific results of his research on a species followed by a more popular overview of the species and the landscape it inhabits. He did this for his pioneering work on mountain gorillas (*Gorilla beringei beringei*; Schaller 1963, 1966), Indian tigers (*Panthera tigris*; Schaller 1967, Schaller and Selsam 1969), Serengeti lions (*Panthera leo*; Schaller 1972, 1973), and Himalayan sheep and goats (Schaller 1978, 1982). Tibetan wildlife is his latest subject, beginning with *Wildlife of the Tibetan Steppe* (1998) and now paired with *Tibet Wild*. I value the specificity of Schaller's scientific observations and the clarity of his presentation. As a far less adventurous nature lover, I admire and am thankful

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