

beetles, grasshoppers, and spiders. They have different foraging behaviors on their breeding and wintering grounds. During the nesting season they specialize in gleaning caterpillars from live leaf surfaces and are largely arboreal, rarely using hanging maneuvers during their leaf gleaning. In the winter, however, they become "aerial leaf-litter specialists," with more than three-quarters of their foraging done on hanging dead curled leaves. They use a variety of hanging maneuvers, such as the maneuver illustrated in the cover picture. Their relatively large bills and short tarsi (legs) are considered adaptations for this highly specialized foraging mode. They also show a pronounced propensity for manipulating the hanging leaf substrate. It is suggested that the change in foraging behavior between seasons results from the differing behavior of arthropods on the temperate breeding grounds and tropical moist forest wintering areas. In northern summers caterpillars are diurnal foragers on exposed leaf surfaces where they are easily attacked by gleaning, while tropical arthropods are largely nocturnal foragers that hide during the day in places like dead curled leaves, where more complex foraging behaviors are necessary.

Worm-eating Warblers are forest-interior nesters, and declining and extirpated local populations have been blamed on forest fragmentation of their breeding grounds. When large forest patches are fragmented into many smaller ones, the relative proportion of edge habitat increases, exposing, particularly, ground-nesting species to increased predation by mammals (e.g., raccoons, cats, dogs) and birds (e.g., Blue Jays). Worm-eating Warblers are subject to cowbird nest parasitism, and increasing the proportion of forest edge increases this risk dramatically. Deforestation on the tropical wintering grounds is a further threat to this vulnerable species and may become a more serious problem because moist tropical forests are being cleared at an alarming rate. Hence conservation efforts both in the United States and in the tropics are essential for the continued presence of this interesting warbler species.

W. E. Davis, Jr.

MEET OUR COVER ARTIST

Julie Zickefoose is a freelance artist, writer, and naturalist who is devoted to the study, conservation, and appreciation of birds. She worked as a field biologist for The Nature Conservancy for six years before turning to art as a full-time career. Julie's drawings have been published in *The New Yorker*, and she has painted, drawn, and written for *Bird Watcher's Digest*, *American Birds*, *Bird Observer*, *Ladybug Magazine*, and numerous publications of the U.S. Fish and Wildlife Service. Exhibitions include one-woman shows at Harvard University's Museum of Comparative Zoology, the Cornell Laboratory of Ornithology, the Memorial University of Newfoundland, and the XIX International Ornithological Congress in Ottawa. Awards include a Radcliffe Traveling Fellowship to paint birds of Amazonian Brazil, and International Council for Bird Preservation and Sigma Xi stipends.

M. Steele