

Owlet moths represent one of the most successful branches on the tree of life, whether measured in terms of species numbers, mass, or ecological importance. Adults range in size from a little over 7 mm to what may be the New World's largest insect, the White Witch (*Thysania agrippina*), which has a wingspan that sometimes exceeds 30 cm. Noctuid taxonomy and classification is undergoing a renaissance. Current classifications differ markedly in the number of recognized families and subfamilies for this group of moths. The Noctuidae have been treated as a single family historically, but now are frequently divided into smaller and more natural assemblages, with the resulting classifications differing among workers. Moreover, both molecular and morphological studies indicate that the tiger moths (Arctiidae) and tussock moths (Lymantriidae) are evolutionary derivatives from *within* the Erebidae. Here, we follow Lafontaine and Schmidt's (2010) recent reclassification and checklist for the North American fauna in which four families are recognized: Erebidae, Euteliidae, Nolidae, and Noctuidae. We refer to this group collectively as owlets or Noctuidae *sensu lato* (Noctuidae *s. l.*). We did not include the Arctiinae and Lymantriinae, now two erebid subfamilies, because the common eastern representatives of both groups were treated in Wagner (2005). This book illustrates 726 species of eastern noctuoids, of which 372 species are accorded full (page) accounts; an additional 89 species are diagnosed or in some other way made identifiable. Our western boundary is the hundredth meridian as it was for Klots (1951), a work that greatly influenced the early interests of the first three authors. Each treatment includes a diagnosis, brief notes regarding similar species, common habitats, an approximate range,

phenology, a statement about relative abundance, a brief accounting of larval foodplants, and a Remarks section that is a potpourri of life history, taxonomy, and other relevant notes. For most of these species, we include two adult images, one of a live individual in a representative resting posture and one of a spread specimen. An additional 354 species are treated in abbreviated accounts (without adult images). The set of species selected for inclusion emphasizes taxa likely to be encountered by the layperson or forest manager, attractive species apt to draw public attention, and those of economic significance. A number of scarce or otherwise obscure species are included simply to provide better taxonomic coverage, or because they have interesting life histories, are of conservation concern, or have caterpillars that we otherwise deem noteworthy. Tree- and shrub-feeding taxa, such as the daggers, quakers, pinions, sallows, zales, and especially the underwings (a popular group with collectors), are richly represented.

Introductory sections address the importance of owlets, morphology, larval diets, natural enemies, classification, and various topics related to finding and rearing owlet caterpillars. Within the body of the work, each of the subfamilies, most tribes, and several large genera are introduced separately. The book concludes with two indexes: one for foodplants and a combined taxonomic/subject index.

Our target audience is intended to range from students or laypeople to Ph.D. entomologists with training in systematics. An overarching goal was to prepare a guide that could serve as a portal into the world of lepidopterology (the study of butterflies and moths) for those without training in biology. To make this possible we offer extensive introductory text,

### BIRDS AND CATERpillARS (AND CLIMATE CHANGE)

The arrival of birds to temperate forests each spring is timed to coincide with peak insect biomass. The numbers and weight of nestlings that can be reared, the rapidity of their growth, and the number of broods attempted are all influenced by the amount of food available to the nesting parents. In temperate forests, much of the insect forage is made up of caterpillars (Nagy and Holmes 2005, Rodenhouse and Holmes 1992), especially those of inchworms (Geometridae), leafrollers (Tortricidae), and owlets. Most of the owlet caterpillars available to foliage-gleaning birds come from just three of the 63 or so tribes represented in this work: the Orthosiini, Hadenini, and Xylenini (all Noctuinae). Daniel Janzen, who has studied caterpillars for more than two decades in the tropics, refers to caterpillars as the hamburger of forested ecosystems. While graphic and rich, the metaphor understates the importance of caterpillars to birds—we venture that caterpillars make up no less than 60% of the diet of many songbird nestlings. One of the dangers of climate change is that some plants and animals will find themselves mismatched with the seasonal or phenological cycles upon which their survival is dependent. When spring comes early, most insects can adjust, because much of their vernal activity is triggered by ambient temperatures. But, migratory birds wintering in the Caribbean or Latin America are timing their migrations, courtship, mating, and nesting activities by changing day lengths, oblivious to whether or not eastern North America is experiencing an earlier-than-average spring. Phenological mismatching and diminished nestling success tied to climate change has been documented in the great tit (Visser et al. 2006) and several other species in Europe. The extent to which this phenomenon is challenging birds and other wildlife elsewhere is in much need of study.

■ EASTERN BLUEBIRD ON  
WAY TO FEED NESTLINGS. ■

