

题名: DETECTING POPULATION TRENDS IN MIGRATORY BIRDS OF PREY

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摘要: Counts of visible migrants at traditional watchsites throughout North America provide an opportunity to augment population-monitoring efforts for birds of prey. We analyzed hourly counts of migrating raptors at one inland (Hawk Mountain Sanctuary, Pennsylvania) and one coastal (Cape May Point, New Jersey) watchsite in northeastern North America. Hourly counts of migrants have been collected for 38 years at Hawk Mountain Sanctuary and for 28 years at Cape May Point. We compared effort-adjusted, arithmetic-mean passage rates to five geometric-mean indexes for 12 species. We used reparameterized polynomial regression to estimate trends in the indexes and to test the significance of trends from 1976-1978 (average index over three-year period) to 2001-2003. Effort-adjusted, arithmetic-mean indexes corresponded to more sophisticated indexes on the complete data sets but did not perform well on simulated data with missing observation days. We recommend the use of a regression-based, date-adjusted index for the analysis of hawk-count data. This index produced trends similar to other geometric-mean indexes, performed well on data sets simulating reduced sampling frequency, and outperformed other indexes on data sets with large blocks of missing observation days. Correspondence between trends at the watchsites and

主题词: Falconiformes raptors migration monitoring population index population trends

题名: STOPOVER HABITAT USE BY SPRING MIGRANT LANDBIRDS: THE ROLES OF HABITAT STRUCTURE, LEAF DEVELOPMENT, AND FOOD AVAILABILITY

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摘要: Stopover habitat quality may influence the abundance of migrant landbirds, yet little is known about how spatial and temporal changes in stopover habitat quality influence the use of habitats by migrant landbirds. From late April to late May, 1997-1999, we surveyed migrant landbirds within five habitats (early successional shrub-sapling-stage forest, midsuccessional pole-stage forest, mature forest interior, mature forest-agricultural edge, and mature suburban forest) in central Pennsylvania. To assess relative quality of stopover habitats, we measured species abundance, species richness, and foraging behavior of Yellow-rumped Warblers (*Dendroica coronata*). We measured vegetation structure and phenology to examine proximate cues of potential importance in habitat selection. Of nine transient (nonbreeding) species analyzed, seven-Least Flycatcher (*Empidonax minimus*), Nashville Warbler (*Vermivora ruficapilla*), Northern Parula (*Parula americana*), Magnolia Warbler (*D. magnolia*), Black-throated Blue Warbler (*D. caerulescens*), Yellow-rumped Warbler, and Blackpoll Warbler (*D. striata*)-were most abundant in mature forests, and especially edge-dominated mature forests (forest-agricultural edge and suburban forest). Habitats used

主题词: migration Pennsylvania Nearctic-Neotropical migrant landbirds stopover habitat