

No fewer than 75 pairs of peregrine falcons (*Falco peregrinus*) are known to be nesting in at least 50 urban areas in North America. The primary criteria needed for urban nesting peregrine falcons are a safe nest site, and sufficient food. Nest sites are provided in urban areas by man-made structures including buildings, bridges, smokestacks and other miscellaneous structures. Oftentimes the birds use specially designed nest boxes attached to these structures. Prey items of urban peregrine falcons are varied and change seasonally. A wide variety of migratory species have been recorded, with some of the most common species being found in highest numbers at urban peregrine nests. Additionally, evening hunting has been reported at urban sites. Urban nesting by peregrine falcons is a significant factor in the recovery of some regional populations. In the midwestern U.S. in 1993, 31 of 43 successful pairs were found in urban areas. It may be possible for peregrine falcon populations to exceed their known historical highs due to the availability of urban nest sites. The use of these sites will provide a unique, yet challenging opportunity for wildlife management.

THE WHITE-TAILED KITE: GIS ANALYSIS OF HABITAT SELECTION IN THE SACRAMENTO VALLEY, CALIFORNIA WITH IMPLICATIONS FOR CONSERVATION OF WILDLIFE IN AGRICULTURAL LANDSCAPES

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Current agricultural practices in the Sacramento Valley, California reduce native wildlife habitat resulting in loss of nest sites and foraging areas for the black-shouldered kite (*Elanus caeruleus*). Data were collected by means of road transect surveys (1990–93) and nest surveys (1993) and analyzed with a GIS program. Preliminary data show that these microtine specialists select specific habitats, such as natural vegetation, rice stubble (winter), and fallow fields, which are relatively rare elements in the agricultural landscape. Eight of 20 original courting pairs (in a 20 × 24 km area) successfully defended nest territories and fledged young ($\bar{x} = 2/\text{nest}$). A majority of the courting kites were displaced by Swainson's hawks (*Buteo swainsoni*)—a threatened species in California). The competition straining the coexistence of the kite and other hawks warrants further investigation. Identification of patterns of wildlife use in areas limited in natural habitat patches will assist conservation efforts to farmscape (agricultural land management to encourage wildlife compatibility). In the future engineered landscapes may be necessary to ensure survival of interrelated species across all trophic levels.

THE USE OF MAN-MADE NEST-SITES BY AN INCREASING POPULATION OF OSPREYS IN THE CANADIAN GREAT LAKES BASIN

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The Great Lakes drainage basin is inhabited today by over 36 million people, and ospreys (*Pandion haliaetus*) breed in many parts of the basin. Considerable changes to habitats utilized by ospreys have occurred, particularly during the 20th century, associated with urban, industrial and recreational development. Prior to 1945, ospreys in Canadian parts of the basin bred only in trees. Since then an increasing proportion have bred on a wide range of man-made structures, including hydro poles, transmission line towers, navigation and communication towers, buildings, and customized artificial platforms (single poles, tripods and quadropods). In the period 1988–93, nests on man-made structures occurred significantly more often along the Great Lakes shorelines (48%) than further inland (29%). On Lake Huron, 82% of artificial platforms were occupied within one year of installation, suggesting a shortage of suitable natural nest-sites on the main Great Lakes. Nests on man-made structures fell down only slightly less often (9%) than did those in trees (12%), and reproductive output was only slightly higher (1.14 versus 1.06 young per nest occupied in mid-May, respectively). Osprey population increases, following restricted use of organochlorine pesticides, appear to have been assisted by nesting on man-made structures, as well as a general high degree of tolerance to human activities near nests.

HOW URBANIZATION INFLUENCES RAPTOR ECOLOGY

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Eastern screech-owls (*Asio otus*) were studied in a rural area, an adjacent 10-yr-old suburb isolated by countryside, and a nearby 30-yr-old suburb of Waco, Texas, 1979–1987. Those in the younger suburb were intermediate in most ecological features, suggesting gradual urbanization linked to city age and growth. Owls in the older suburb were more productive and denser, benefiting from a more moderate climate, more food, and fewer predators compared to the rural population. No similar study exists for other raptors. Data on tawny owls (*Strix aluco*) and merlins (*Falco columbarius*) suggests similar features in cities relative to the countryside. This is true of birds generally.

SPOTTED OWLS IN MANAGED FORESTS OF WESTERN WASHINGTON AND OREGON

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