

Spring 1971

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Recommended Citation

Matthiae, PE. 1971. Change in the urban-rural ecotone. Field Station Bulletin 4(1): 1-17.

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CHANGE IN THE URBAN-RURAL ECOTONE

Conversion of the rural Wisconsin landscape from farms to housing poses serious wildlife management and utilization problems. The problems are aggravated by the unregulated and unplanned nature of the land use changes.

Agricultural land is being removed from production in three categories: 1) by direct purchase of entire farms for a non-farm residence or for "speculation"; 2) by purchase of portions of farms in parcels ranging from 2 to 40 acres for single family residence; 3) by purchase of entire farms for the construction of subdivisions. Purchase of farms for future development often results in removal of the entire farm from crop production. Occasionally the choicest tillable acres are rented or leased to a neighboring farmer, but even so, the remaining land is allowed to lie fallow and undergo old field succession. In a few cases pine plantations or wildlife food patches may be established or a pond constructed. Similarly, fallow fields and old field successions develop when the farmer himself withdraws land from agricultural use without change of ownership.

When acreage is purchased for a residence the buyer seldom develops or manages more than an acre of land around the homesite. The remaining acreage generally lies fallow or is seeded or planted to trees providing additional wildlife habitat. In contrast, construction of an isolated subdivision adds little useful habitat, but instead poses a barrier to wildlife movement and management.

Wildlife such as deer, pheasants, red fox, rabbits, squirrels, racoon and several birds of prey benefit from land abandonment and vegetational change. Birds of prey depend for food on rodent populations, including those of such species as the meadow vole (*Microtus pennsylvanicus*), which flourishes in the rank grass of the abandoned hay fields. Large numbers of rough-legged hawks

(*Buteo lagopus*) and sparrow hawks (*Falco sparverius*) were observed during the past winter concentrated near the overgrown fields within the confines of the urban-rural ecotone north and west of Milwaukee. 17

Cultivated fields when abandoned undergo rapid succession from annual and perennial weeds and grasses to forbs, shrubs and young trees. Abandoned hay fields give way more slowly to invading plants and brush and may sustain their grassy meadowlike character for some years. Plowed or stubbled agricultural land provides little if any food and cover during the winter and spring. Cessation of cultivation and gradual revegetation thus provides more extensive usable summer habitat, but in addition, these varied stands also provide the diversity of food species essential to sustain wildlife populations on a year round basis. When these semi-wild areas are interspersed with agricultural land, corn, alfalfa, wheat, hay and orchard areas, wildlife food and cover resources are further enhanced.

With the possible exception of a few adaptable open land species, as woodchucks (*Marmota monax*) and thirteen-lined ground squirrels (*Citellus tridecemlineatus*), land which is intensively farmed is rarely productive of wildlife. In the prairie farmlands of Iowa, Nebraska and South Dakota pheasant populations have declined in recent years, a direct result of increased agricultural mechanization and changes in farming techniques which have eliminated fence line cover and thus winter food supplies. Conversely, land which is removed from production and undergoes succession to brush stages is often highly productive of game such as rabbits, pheasant, woodcock, and deer and of other wildlife species. In the gradual regrowth of vegetation more edge is created; and edge, i.e. the interface between differing vegetation types, is the most productive habitat known.

Wild land and wildlife in proximity to a city are valuable aesthetic and educational resources, and hence essential components of a quality human habitat; wildlife are a resource available to those living in the fringes of the city but as yet lost to those in the heart of the metropolis. Perhaps by incorporating wildlife habitat potentials into urban-rural planning some immediate problems in wildlife management can be alleviated and concepts developed to improve the habitat for citizens of large metropolitan areas.

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