

fessional trips). Barn Swallows were also observed at other times of the day on weekends, and during periodic trips into the barn at night. Most observations were made from ground level (in or outside the barn), but sometimes observations were made through an opened window or door in the haymow.

RESULTS

Nests and Nesting

The peak in spring arrivals of Barn Swallows in central Illinois is from 25 April to 25 May, and departures mainly occur in late July and August (Graber, Graber, and Kirk 1972). Shortly after arrival at the old dairy barn, nesting activities begin. This involves preliminary inspection of the lower level of the barn, repair of old nests, and building of one-to-three additional nests (replacing any that have fallen down over the winter). Sometimes after a nest is repaired, adults build or occupy another nest. Mud is the main material used in nest construction and repair. Swallows gather the mud at a pond and rain pools near the barn particularly along a driveway. Usually four-to-eight nests are utilized in a given year, but some nests remain unoccupied each year. Two types of nests are built. Most nests are attached vertically to the rough sides of upper beams in the lower level of the barn. Occasionally a nest is built on top of a beam but such locations are uncommon (even though plenty of space is available and nests would presumably be more stable). The shapes of the two types of nests are quite different (Bent 1942). Those attached to the side of a beam are wedge- or con-

ical-shaped, while those constructed on top of a beam are round with a flare around the flat bottom. Often the latter type of nest is constructed at the junction of two beams, in which case one side of the nest is flattened due to it abutting the side of the upper beam. Two broods are sometimes raised in a given nest in a single year. Moller (1994) reported from one-to-three broods being raised annually, but the latter is more typical of southern latitudes.

One nest is of particular interest because it has been used every year for 18 consecutive years. Bent (1942) indicated that the same nest can be occupied for "a number of years," Shields (1984) reported re-use of two old nests for four sequential years in the Adirondacks of New York, and Merrill (1947) recorded persistent nest use for seven years in Fayette County, Illinois. In their in-depth review of the biology of Barn Swallows, C. Brown and M. Brown (1999) reported some nests that have been repaired and "lasted intact" for 17 years in Nebraska. However, they did not indicate if broods were raised every year (as previously mentioned, mere repair does not necessarily mean that a nest will be occupied and a brood raised). For the European subspecies, Vansteenwegen (1982) estimated longevity of nests to be eight years based on percent of new nests constructed per year. Thus, the nest in the old dairy barn apparently represents the longest continual use (18 years) on record.

In every year, two broods were raised in the old nest I observed. An attempt was made to start a third brood in one year but the nest was eventually abandoned.

Re-use of a nest in a single year is not proof that a single pair of parents can raise more than one brood (Graber, Graber, and Kirk 1972). Shields (1984) found that after their first successful nesting, breeders tended to move to another nest.

The old nest in the dairy barn has always been given nearly immediate attention by returning Barn Swallows in the spring by adding new mud to any deteriorated or weak areas. Thus, this well-kept nest has never fallen to the



Fig. 1. Old dairy barn in northern McLean County of central Illinois where Barn Swallows (*Hirundo rustica*) were studied from 1971-2001. Photo by Robert Weigel.