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Polygyny and double-brooding in the Least Flycatcher.—Polygyny is considered rare among the flycatchers (Skutch 1960), and has been detected in only four species in North America (Ford 1983, Prescott 1986). Two cases of bigamy in the Acadian Flycatcher (*Empidonax virescens*) and one case in the Willow Flycatcher (*E. traillii*) are the only instances recorded in the genus (Mumford 1964, Prescott 1986). Here we report on a polygynous mating and two cases of double-brooding in the Least Flycatcher (*E. minimus*).

Study area and methods.—We studied Least Flycatchers nesting in the forested dune ridge along the south shore of Lake Manitoba, Manitoba (see MacKenzie 1982 for description of study area). All observations were made in 1985 when flycatchers nested at a density of 4.9 pairs/ha, with approximately 79 pairs on the study area (Briskie 1985). The polygynous male and both the primary and secondary females were individually marked with color bands or paint. We did not know the order in which the pairbonds were formed, so we assumed the first female to initiate laying was the primary female. The second double-brooding attempt involved an unbanded male and a banded female.

Growth and parental feeding were examined in all three nests of the polygynous male. Nestlings were weighed on an Ohaus scale to the nearest 0.1 g at 10 days of age. At 8 days nestlings were banded with aluminum and year-specific color bands. Feeding observations were made from 15 to 20 m with a 20× spotting scope. Numbers of prey delivered by each sex within a 2-h period were recorded. Observations were made when nestlings in the primary nest were 8 and 11 days old. Observations at the secondary nest were made only when the young were 11 days old. The second nest of the primary female was observed at the ages of 2 and 11 days.

Nesting chronologies.—The nest of the primary female was found on 2 June. The first of four eggs appeared on 6 June. Hatching began early in the evening of 21 June and was completed by the morning of 23 June. The second egg laid was damaged and did not hatch. It was found beneath the nest on 25 June and contained a 10–12-day-old embryo. The first nestling fledged on 6 July; the two remaining young fledged the next day.

The nest of the secondary female was found 21.5 m from the nest of the primary female on 7 June. The first egg was laid on 9 June, 3 days later than the first nest. The clutch of four was completed on 13 June. Hatching began in the late afternoon of 24 June, and all four nestlings were present by the morning of 26 June. Three nestlings fledged on 9 July; the last left the next day.

On 14 July, the second nest of the primary female was found 3.5 m from her first nest. The first of three eggs was laid on 15 July, eight days after the first brood fledged. One nestling died during hatching; however, the two remaining nestlings fledged on 16 August. The male and female remained mated for both broods.

The second case of double-brooding was initiated on 22 July. The first brood of this female was initiated on 12 June. Both nests were built in the same tree crotch. Four eggs were laid in each clutch, but only three young fledged from the first brood (one nestling was removed for use in brood manipulation experiments [Briskie 1985]). Seven days elapsed between the fledging of the first brood and the laying of the first egg of the second brood. The second nest was preyed upon on 6 August, the day the clutch was due to hatch.

Parental feeding and growth.—The polygynous male fed nestlings in both first broods, but most of the prey items were delivered to the young of the secondary female. During 2 h of observation, 55.1% of the 69 prey items fed to young in the secondary nest were delivered by the polygynous male. In contrast, the polygynous male delivered only 8.9% of the 112 items brought to young in the primary nest during 4 h of observation. Deliveries of prey items by the male to the second brood of the primary female (44.7% of 38 prey

items during 4 h of observation) equalled those of the female; however, the male did not feed the young after they fledged.

Despite the low investment in feeding by the male, nestlings in the primary nest grew as well as did nestlings in both the secondary nest and the second nest of the primary female (mean mass at 10 days of primary brood: 10.6 g, $N = 3$; secondary brood: 8.9 g, $N = 4$; second brood of primary female: 9.6 g, $N = 2$).

Discussion.—To our knowledge this is the first report of polygyny in the Least Flycatcher. Although we found over 125 flycatcher nesting attempts on our study area in 1985, only a few of the birds were color marked. As a result, we do not know what percent of the population was polygynous.

Double-brooding in Least Flycatchers has been reported previously by Hoffman (1901), Bent (1942), and Walkinshaw (1966), although none of these researchers mentions whether the birds they studied were individually marked. Using marked birds, we observed double-brooding in a minimum of 2 of 79 pairs (2.5%) on the study area in 1985. Young fledged successfully in only one of the nests.

Least Flycatchers arrive on our study area in mid-May and depart for the wintering areas in Central America by mid-July (Sealy and Biermann 1983). Typically, this allows only one successful nesting attempt per season. In order to raise a second brood, pairs must remain approximately 40 days longer than single-brooded birds (pers. obs.). Double-broods were the last clutches to be initiated and the last broods to fledge in 1985. By remaining on the breeding grounds adults and young possibly face unfavorable weather and lower insect abundance. As adult Least Flycatchers are territorial on the wintering grounds (Rappole and Warner 1980), delaying migration may also prevent birds from establishing and maintaining territories in Central America (Sealy and Biermann 1983). Together, these factors may have selected against a high frequency of double-brooding at this latitude.

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Short-billed Dowitchers associate closely with Lesser Golden-Plovers.—On their European breeding grounds Dunlins (*Calidris alpina*) often feed in intimate association with Greater Golden-Plovers (*Pluvialis apricaria*), even when the latter are dispersed on their breeding territories. Dunlins appear to associate with the plovers for vigilance, and typically one (but sometimes 2–3) Dunlin follows an individual plover (Byrkjedal and Kålås 1983, *Ornis Fennica* 60:10–15; Thompson and Thompson 1985, *Ibis* 127:559–562).

While studying behavior of breeding Lesser Golden-Plovers (*P. dominica*) at Churchill, Manitoba, in 1986, I observed 5 cases of Short-billed Dowitchers (*Limnodromus griseus*) associating with Lesser Golden-Plovers on the tundra in a manner closely resembling the Dunlin–Greater Golden-Plover association. (1) On 26 June, I entered a golden-plover territory and found the female feeding in a patch of sedge tundra together with a Short-billed Dowitcher. The dowitcher followed the golden-plover at distances of from 0.5 to 1.5 m, while constantly feeding. I deliberately flushed the birds three times, and each time the dowitcher stayed within 1.5 m of the golden-plover, resuming feeding once they had alighted. I left the territory after about 35 min, and the birds were still together. (2) At a scheduled observation on 7 July at another golden-plover territory, the male flew up and landed on a piece of sedge tundra with a dowitcher following closely. Both birds started to feed at once, and the dowitcher followed the golden-plover at distances of from 0.5 to 1 m. During the 6 min that they stayed in view, the golden-plover attacked the dowitcher twice by rushing towards it with lowered head, but did not succeed in driving the dowitcher away. (3) At a nest inspection in the evening of 7 July the same golden-plover male (color marked) was accompanied by a dowitcher as soon as the plover left the nest. The male stood vocalizing (giving a two-syllable alarm call) about 20–30 m off, when the dowitcher flew up to him from a patch of sedge tundra about 60 m away. The dowitcher started to feed within 0.5 m of the plover. I observed the birds together for about 10 min. When I retreated, the golden-plover approached the dowitcher (as in case 2), which subsequently stood and watched as the golden-plover walked back to the nest. (4 and 5) On 13 July I saw a dowitcher feeding together with a female golden-plover in one territory and another one feeding along with a plover of unknown sex in a patch of sedge tundra near a second territory. In both cases the dowitchers followed the movements of the golden-plovers within 1 m distance during the 2–3 min it took me to pass by.

As do Dunlins in association with Greater Golden-Plovers, the dowitchers (1) walked closely behind the golden-plovers, following their movements on the ground, (2) took flight