Cowbird survival, from laying to first breeding season, has been estimated at about 2.6% (or 38.5 eggs to produce 1 yearling; Scott and Ankney 1980, Lowther 1993). This means that about 31.5 million eggs would need to have been laid in host nests. Female cowbirds likely lay 20 to 30 eggs per season (Jackson and Roby 1992, Holford and Roby 1993); one captive bird laid 77 eggs when 2 years old (Holford and Roby 1993). Is this level of parasitism reasonable? How do the common hosts, at "usual" rates of parasitism, contribute to this number?

Can Illinois hosts accommodate 31.5 million cowbird eggs? Table 1 (page 53) gives Graber and Graber's (1963) estimates of host population sizes along with guesses of rates of cowbird parasitism for common hosts. In Illinois, 16 "common" hosts number about 21 million pairs; this number X 2 nestings X 20% parasitism X 1.5 cowbird eggs/nest, accounts for about 12.6 million cowbird eggs.

This model gives crude representation of cowbird-host interactions; manipulation of estimates, however, gives insight into complexity of reality. Each 1% change in parasitism rate on this pool of host species represents 200,000 cowbird eggs; each 0.1% increase (or decrease) in survival — from egg to breeding — means that about 1.26 million fewer (or more) cowbird eggs need be laid to maintain a stable population; each 10% change in total host population size could account for 1.26 million potential cowbird eggs (if parasitism rates remains constant). These simplistic relationships only hint at reality.

The Wood Thrush is a frequent host of cowbird eggs. This nest photographed by Todd Fink on 4 June 1991 in Union County has two cowbird eggs and three thrush eggs.

Host List.

• **Yellow-billed Cuckoo,** *Coccyzus americanus* — Victim. Common in woodland, edge, and open woods. BBS: 4.5. REF: Friedmann 1963.

• **Eastern Wood-Pewee,** *Contopus virens* — Host. Common in woods. BBS: 2.4. G.K. (1894) reported a nest with 3 + 4 eggs. REF: Friedmann 1929, 1963; Green 1917; Nehring (1880-85); Robinson 1992; Thompson and Robinson 1963; Trine et al., in press.

• **Acadian Flycatcher,** *Empidonax virescens* — Host. Common in bottomland interior forests. BBS: 0.4. REF: Bendire 1895; Friedmann 1929, 1963, Friedmann et al. 1977; Graber et al 1974; Robinson 1992; Robinson and Wilcove 1994; Robinson et al 1995b; Trine et al., in press. SETS: 2 (FMNH and ISM).

• **Willow Flycatcher,** *Empidonax traillii* — Host. Common in scrubby or brushy areas. BBS: 0.6. REF: Friedmann 1929, 1963; Friedmann et al. 1977; Graber et al. 1974; Pohling 1889.

• **Least Flycatcher,** *Empidonax minimus* — Victim. Uncommon in edges and interiors of forests. BBS: 0.1. REF: Nehrling 1880-85; SETS: 1 from ChAS.

• **Eastern Phoebe,** *Sayornis phoebe* — Host. Uncommon on forest edges. BBS: 0.8. Nest with 4 + 3 eggs (Blocher 1936). REF: Blocher 1921, 1924, 1937; Brenneman 1980; Friedmann 1963, Friedmann et al. 1977; Goelitz 1915a; Graber et al 1974; Musselman 1918; Nehrling 1880-85; Poling 1889. SETS: 10 (WFVZ, MVZ, UArk, FMNH, ChAS).

• **Great Crested Flycatcher,** *Myiarchus crinitus* — Victim. Common in upland and bottomland woods. BBS: 2.3. REF: Blocher 1936; Friedmann 1963.

• **Eastern Kingbird,** *Tyrannus tyrannus* — Host. Common in pastures and open areas. Kingbirds are known to eject cowbird eggs (Rothstein 1975). BBS: 4.0. G&G: 650,000 — 300,000. REF: Friedmann et al. 1977; Graber et al 1974.

• **Horned Lark,** *Eremophila alpestris* — Host. Common of open country with short vegetation. BBS: 37.9. G&G: 840,000 — 5,600,000. REF: Friedmann 1929, 1963; Pickwell 1931 [Barnes set]. SETS: 4 (FMNH, ChAS).

• **Bank Swallow,** *Riparia riparia* — Victim. Locally common, associated with banks suitable for nesting. P. Clyne reported cowbird parasitism at a swallow colony in Jackson Park, Chicago, Cook Co. (Kleen 1995). BBS: 0.9. REF: Friedmann 1929, 1963 [Barnes set].