Marking Nestling Crows: an Addendum

Regarding the marking of nestlings: The stated "..approximately 28 days posthatching in both California and Oklahoma" (Caffrey, C. 2002. Marking crows. *N. Amer. Bird Bander* 26:146-150) was misleadingly simple, as well as not quite accurate. Nestling growth rates vary between individuals and across nests. There are 3 to 4 days within their nestling periods when young crows are at the ideal stage of development for marking. Nestlings should be fully feathered, and primary pin feathers approximately half unsheathed (visible when nestlings stretch); primaries should extend at least to rump when wings at sides. Pink gape tissue restricted to base when bill closed, and lower mandible dark (no longer looks pink from underneath, in contrast to associated skin). As nestlings pass through this stage, they soon thereafter acquire a jumping response to "predators" approaching the nest; they must be marked before this response develops. Because of asynchronous hatching, nestlings in the same nest may differ substantially in size; weights have differed by as much as 160 g for individuals that subsequently fledged within a day of each other 5 to 12 d later. Thus a "compromise" in marking date is sometimes necessary. More than 4 to 5 d after nestlings get up on the rim and flap is probably too late.

I have marked appropriately sized nestlings in California in nests where hatching had begun from 26 to 31 d earlier, with a mean of approximately 29 d (n = 5 nests) after the first feeding trip to the nest was observed. In Oklahoma, appropriately sized nestlings were marked in nests where feeding had begun from 24 to 31 d earlier (mean of approximately 26.6 d, n = 13 nests). Easier to determine than the date of first feeding trip to the nest is incubation date; the date females begin sitting on eggs continuously after a couple of days of increasing time in nests. In California, I marked appropriately sized nestlings in nests where incubation had begun 45 to 53 d earlier (mean 49.4 ± 2.4 SD, n = 26 nests). In Oklahoma, the number of days that had passed before nestlings were ready to mark was significantly fewer; appropriately sized nestlings have been marked in nests 41 to 49 d subsequent to the beginning of incubation (mean 45.2 ± 2.2 SD, n = 22 nests, t_{46} = 6.26, $P < 0.001$).

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Primary-Covert Replacement in the Eastern Wood-Pewee

Molt strategies in the Tyrannidae are complex, variable, and poorly understood. First prebasic molts (PBs) in North American species range from partial to complete and can occur on the breeding grounds, the winter grounds, or both (Johnson 1963, 1974; Pyle 1997, 1998). Variability occurs even within genera and species. Prealternate molts also are highly variable, ranging from absent to nearly complete and often more extensive in second-year birds (Pyle 1997).

Some flycatchers replace at least some primary coverts in the first PB (Pyle 1997, 1998). Replacement of outer primary coverts by first-year (HY/SY) birds has been documented in Vermilion Flycatcher (*Pyrocephalus rubinus*) and Olive-sided Flycatcher (*Contopus cooperi*) (Pyle 1998) and suspected but not confirmed in the two wood-pewees (Pyle 1997).

During April and May 2000, several other banders and I had the opportunity to examine 27 Eastern Wood-Pewees (*C. virens*), presumably in northward migration, in the vicinity of Tortuguero on the northeast coast of Costa Rica (10°36' N, 83°33' W). On two of these birds, captured on 17 and 21 Apr, I noticed a subtle molt limit between retained outer and replaced inner primary coverts. The replaced coverts were fresher and duskier, with darker shafts and more barbs, than adjacent retained coverts; they more closely matched the adjacent greater coverts in these characteristics. On both birds, the molt limit was symmetric between the two wings. On the first bird, the inner four coverts had been replaced; on the second,