

NESTING CHARACTERISTICS OF RED-BILLED PIGEONS (*PATAGIOENAS FLAVIROSTRIS*) IN NORTHEAST MEXICO

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Características del anidaje de la Paloma morada (*Patagioenas flavirostris*) en el noreste de México.

Key words: Columbiformes, Red-billed Pigeon, *Patagioenas flavirostris*, nests, Mexico.

The Red-billed Pigeon (*Patagioenas flavirostris*) is a tropical, arboreal, fruit-eating, pigeon inhabiting lowland areas from the Rio Grande Valley of Texas south through Mexico to central Costa Rica (Goodwin 1983, Howell & Webb 1995, AOU 1998). Most knowledge about the species reproduction is from observations of a few individuals in Costa Rica and Texas (Skutch 1964, Brush 1998, Breeden 2002, Lowther 2002).

The reproductive behavior of Red-billed Pigeons was studied at the 526-ha Rancho Los Colorados (22°55'N, 97°49'W) in northeastern Mexico during 21 June–8 July 1995, 23 May–28 June 1997, 6–7 June, 16–18, and 23–27 June 1998, 19–21 June 1999, and 29 June–2 July 1999. The Rancho Los Colorados site is located about 5 km from the Gulf of Mexico in southern Tamaulipas at the northern limit of the Veracruzian biotic province (Puig 1991, Enkerlin-Hoeflich 1995, Eitniewski & Aragon 2000). The cattle ranch has 14 pastures, completely, to selectively cleared of large trees. Understory and overstory native

vegetation remain in shelterbelts along fences and forest fragments. The subdeciduous tropical forest is composed of strangler fig (*Ficus cotinifolia*), coma (*Bumelia laetevirens*), ebano (*Pithecellobium ebano*), chaca (*Bursera simaruba*), ceron (*Phyllostylon brasiliensis*), ojite (*Brosimum alicastrum*) and barreta (*Heliconia parvifolia*) as dominant species in the upper canopy layer (Enkerlin-Hoeflich 1995). During this study, 48 nests were located without a systematic search. We documented nest construction including an analysis of materials contained in two nests.

The greatest number of nests occurred in ebano (60%) with an equal numbers in coma (19%) and chaca (19%). A single nest was located in strangler fig (2%). Nests heights, distance from trunk to nest, and distance to nearest nest are summarized in Table 1. According to Enkerlin-Hoeflich (1995), tree dominance in 828 patches, of all vegetation types, was ebano (47%), coma (13%), fig (12%), and chaca (7%). Red-billed Pigeons selected nest trees consistent with the natural

TABLE 1. Nest-tree characteristics [Mean (SE)] of the Red-billed Pigeon.

Tree species	Height above ground (m)	Distance from trunk to nest (m)	Distance between nests (m)
<i>Bumelia laetevirens</i>	10.2 (1.0) n = 9	3.9 (1.0) n = 6	48.5 (23.5) n = 2
<i>Pithecellobium ebano</i>	8.9 (0.6) n = 29	2.7 (0.3) n = 29	47.8 (7.5) n = 9
<i>Bursera simaruba</i>	9.6 (0.6) n = 9	2.8 (0.2) n = 6	57.8 (2.9) n = 4
<i>Ficus cotinifolia</i>	10.0 n = 1	5.0 n = 1	No data
Overall mean	9.7	3.61	51.3

abundance of the tree species, except chaca was preferred over coma. The structure of chaca, with larger and longer branching limbs, allowed positioning of nests at a greater distance from the tree trunk, out of reach of larger mammalian predators [e.g., white-nosed coati (*Nasua narica*), striped skunks (*Mephitis mephitis*), raccoons (*Procyon lotor*), and four-eyed opossum (*Philander opossum*)]. Most predation, however, was reptilian or avian (Enkerlin-Hoeflich 1995, Eitniear & Aragon 2003). The lack of nests in strangler fig may be attributed to the use of this species as a food resource (Lowther 2002). Although the species is not highly territorial (Lowther 2002), protecting the nest tree from conspecific foraging within it may be problematic.

During nest construction, sticks were delivered on average once every 3.3 min (n = 33). The placement of a stick within the nest averaged 27 s (n = 22). Two dismantled nests contained 120 and 145 sticks, respectively. Considering the rate of stick delivery, the construction of these nests required 7.5 – 9.1 h, probably over 3 days (Skutch 1964). Nests were constructed of sticks (mean length 2.5 cm \pm 0.5) and grasses (mean length 7.5 cm \pm 0.7). While nests were infrequently encoun-

tered in the same or adjacent tree, six nests were spaced an average distance of 43 m. All nests contained a single egg (Eitniear & Breeden 2003) that was incubated by the male (identified by its more brilliant plumage coloration) from about 10.00 h until 18.00 h, and the female from 18.00 h until 10.00 h. The construction of the nest and periods of incubation were consistent with Skutch (1964).

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