

**RED-COCKADED WOODPECKERS IN NORTHWESTERN FLORIDA
PRODUCE A SECOND CLUTCH**

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In 1993, one group of the cooperatively breeding Red-cockaded Woodpecker (*Picoides borealis*) (RCW) on Eglin Air Force Base (EAFB), Florida, produced a second clutch of eggs after successfully fledging one male from the first brood. It was thought that double brooding (and double clutching) did not occur in RCWs (Walters 1990) until it was detected in three separate populations in North and South Carolina in 1991 (LaBranche et al. 1994). This note documents the first reported observation of double clutching in RCWs in Florida.

EAFB contains 188185 ha and is located on the Gulf of Mexico approximately 72 km east of Pensacola, Florida. The sandhills ecological association (FNAI and FLDNR 1990) makes up approximately 78% of Eglin (Dept. of Defense 1993) and consists of a sparse to dense longleaf pine (*Pinus palustris*) overstory, with turkey oak (*Quercus laevis*), live oak (*Quercus virginiana*), and other hardwoods in the midstory. In some areas, sand pine (*Pinus clausa*) is codominant in the overstory.

A random sample of 51 RCW active clusters was chosen in January 1992 for the purpose of monitoring demographic trends. These groups represented approximately 23% of the population on EAFB.

Beginning in April of the 1992 and 1993 breeding seasons nest trees of monitored groups were climbed and checked for the presence of eggs every five to eight days. Hatchlings were banded at five to nine days old. Groups were again visited at approximately 28 days post-hatching to check for fledglings. Date of clutch completion was estimated by counting back from age of chick to hatching date. Clutch completion is then 11 days prior to hatching (Walters et al. 1988). All procedures for capturing and banding RCWs were similar to those described in Walters et al. (1988).

In the 1993 nesting season, 26 of the monitored groups were observed more intensively as part of a home range and foraging study. Each of the 26 groups was visited two to four times a month, and the birds were followed for two to six hours per day while observers recorded foraging behavior and spatial locations. During one of the visits on 17 June 1993, the breeding birds of one group (95C) were observed making regular trips to and from the nest tree from which they had successfully fledged one male on 3 June 1993.

On 22 June 1993 the tree was climbed and four eggs were observed in the cavity. Three were of normal size and color and the fourth was one-half to two-thirds the size of a normal egg, and slightly transparent. When the nest tree was checked again on 30 June 1993 no hatchlings or remnants of egg shells were found. It is unknown whether or not the eggs hatched. The group consisted of the same adult breeding male and female as in 1992, plus a one-year-old male helper fledged from the same cluster in 1992, and the newly fledged male.

LaBranche et al. (1994) reported five incidents of double brooding in the North Carolina Sandhills, one incident in the South Carolina Sandhills, and one in a coastal population in North Carolina. All groups but the latter one were successful in producing at least one fledgling from the second brood.

In the North Carolina Sandhills population, females producing two broods were from four to seven years old, whereas those producing single broods had a median age of three years. Double broods were produced by pairs that initiated their first nests early in the breeding season (four of five first clutches were initiated before 21 April 1991). Second clutches were initiated between 7 and 23 June, whereas second clutches by groups whose first nest failed were initiated between 9 May and 19 June.

The age of the breeding female of group 95C on EAFB cannot be determined because she was banded as a breeding adult in 1992. However, like the groups exhibiting double brooding in the North Carolina Sandhills, group 95C nested early, completing its first nest on 24 April 1993 and the second between 17 and 22 June. Two other first clutches on EAFB were completed on 22 April 1993. The median date of first clutch completion was similar for 1992 and 1993 at 1 May and 3 May, respectively. After 22 June, the twelve earliest nesting groups that successfully produced at least one fledgling were rechecked for evidence of second clutches, however, none were found.

LaBranche et al. (1994) suggest that double brooding in RCWs occurs in years of extreme nesting effort. Nesting effort is evidenced by the proportion of groups actually attempting to nest and the probability of renesting after failure. Based on data from 1981 to 1991, nesting effort in 1991 was the second highest in the North Carolina Sandhills population (LaBranche et al. 1994). The North Carolina coastal population located in Croatan National Forest also exhibited the highest nesting effort among the three years they were studied in 1991.

Although we have only two years of data, the RCW population of EAFB did not appear to exhibit extreme nesting effort in 1993 when double clutching occurred. Of the clusters sampled, 88.2% and 80.3% attempted to nest in 1992 and 1993, respectively. Seven of nine groups whose nests failed on the first attempt renested in 1992, whereas only three of 11 groups with failed first nests renested in 1993. Of the attempted nests, 88.8% were successful in 1992 and 75.6% in 1993.

Of the cases documented, double clutching has been found in the earliest nesting groups, generally with older females. LaBranche et al. (1994) propose that double clutching is a rare event which happens in years of high nesting effort. Although we cannot conclude that the double clutch on EAFB occurred in a year of low nesting effort, the accidental detection of it and the fact that we are studying only 23% of the population suggests that double clutching may be more common than previously thought.

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