**Ko’ko’ Demographic Literature**

**Nesting and young information:**

Jenkins (1979) reports nesting is expected to occur year-round, but the number of nests per year was unknown. Peak breeding may be during the rainy season from July to November. The typical clutch consists of 3-4 eggs, which hatch asynchronously. Young are highly precocial and leave the nest within 24 hours after hatching and broods range from 1-4 chicks. During the first 3 weeks, young are in natal down and juvenile contour feathers develop around 4 weeks old. Between 4 and 16 weeks, birds are in juvenile plumage. After the 16th week, the first-year birds are not visibly distinguishable from adults. The age of sexual maturity is unknown.

U.S. Fish and Wildlife Service (1990) reports that Ko’ko’ lay 2-4 eggs and incubation lasts for 21 days. In captivity, reproduction first occurred at 5 months of age.

Perez (1968) reported field notes that indicate Ko’ko’ are capable of breeding year-round and the broods were observed in all months. Higher chick production was noted in winter and peaked in late summer through fall. Pairs were observed in all months of the year, but majority observed in early summer through fall. Females with eggs were observed in all seasons.

Haig et al. (1990) evaluated the management options for selecting breeders to produce young Ko’ko’ to release to Rota. They report that Ko’ko’ are monogamous and from long term pair bonds, that are highly territorial and breed throughout the year. The average clutch size ranged from 1-5 eggs, with a single pair observed to raise up to 5 broods per year in captivity. They report sexual maturity at 5 to 6 months of age.

Nguyen et al. (n.d.) report that Ko’ko’ are able to reproduce at 4-6 months and can re-nest approximately every 40 days. Ko’ko’ can exhibit high fecundity and have been documented raising up to ten broods in a year. Captive bred birds typically breed around 5-6 months, records of successful breeding by 13-year-old males and 9-year-old females. At Area 50, a release site for Ko’ko’ in 1998 on Guam to a snake exclosure, renesting was from 27 to 112 days between nests. In captive breeding on Guam, female Ko’ko’ re-nest in as little as 14 days after previous clutch hatched. Guam population averages 2.94 eggs, and the Rota population averages 3.4 eggs. Ko’ko’ on Cocos Island are presently successfully hatching young with the presence of BTS on the island.

* Typical clutch consists of 3-4 eggs according to Jenkins (1979) and 1-5 eggs according to Haig et al. (1990), incubation lasts for approximately 21 days (U.S. Fish and Wildlife Service 1990).
* Broods range from 1-4 chicks (Jenkins 1979) and in captivity, a single pair can raise up to 5 broods per year (Haig et al. 1990).

**Survival information:**

According to Nguyen et al. (n.d.), first-year survival was reported for captive populations as 80.2% for females and 76.8% for males. Survival of captive birds released into the wild would generally be lower due to predation, naivety, and failure to forage. For example, BTS have been found with Ko’ko’ remains in their stomach. Cats also predate Ko’ko’ both on Guam and Rota, the primary limiting factor of Ko’ko’ on Rota, but cat predation also occurs on Cocos Island. There have been successful releases to Cocos, Rota, and temporarily to Guam Area 50.

* First-year survival for captive males reported as 76.8% and for captive females 80.2% (Nguyen et al. n.d.).

**References**

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