

Breeding behaviour and egg clutch size variation in Red-vented bulbul (*Pycnonotus cafer*) at Udaipur district, Rajasthan

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Abstract

Nests, egg, clutch size and hatchlings of red vented bulbul were observed from January, 2017 to December, 2019. During the observation we recorded 16 nests. Out of them 62.50% nests were observed with 3 eggs and 37.50% nests with 2 eggs. Total 42 eggs were recorded during study period. Out of 16 nests eight (50%) nests had eggs and hatchling while remaining eight (50%) nests had only eggs. Number of hatchling depends upon size of clutch. Egg laying and hatchling are directly related with environmental factors like availability of nesting material and food in breeding season. Food plays vital role for new born and adults survival.

The red vented bulbul is resident breeder, widely distributed throughout the Indian subcontinent including some area of Burma, Sri-lanka and China³. Linnaeus⁴ gave classification and genus and species name. The red vented bulbul inhabits shrubs, forest, gardens and urban area. *Pycnonotus cafer* breeds all the year round², but peak of reproduction occurs between January to October¹. The bird can give up to about three broods per season⁴. The birds have multiple clutches and lay two to four eggs at a time².

The eggs are pale pinkish in colour and intensely marked with purplish brown. The eggs are incubated for about 14 days¹. When not breeding, they tend to form large flocks and gather together in communal roosts⁶. Nest site selection is directly related with breeding success. The selection of nest site mainly depends upon environmental factors and availability of nesting materials⁶.

Objective of Study :

The current study was designed with

the aim of assessing clutch size variation, breeding behaviour, and hatchling success and nesting status of red vented bulbul in Udaipur district of Rajasthan, India.

Breeding behaviour, nest and clutch size variation were observed by using Canon 550 D with 18-135mm lens, Cannon 60 D with 150-500 mm lens and Olympus 8X40 DPS-I Binoculars. Systemic study of nest construction, hatching and brooding, rearing and clutch size variation were observed from January 2017 to December 2019 throughout years. The observations were recorded during dusk (6 P.M.- 9.00 P.M.) to dawn (5.00 A.M. to 6.30 A.M.).

Breeding is a natural process of producing young ones, plays a vital role for the continuance of generation. It is the means by which populations survive and increase in number. Red vented bulbul generally breeds in monsoon season. During breeding season male and female both participate in nest construction activities. All the located nests were checked daily during the onset of breeding season twice a day to determine the egg laying time, incubation period, hatching eggs, feeding behaviour, first flight by fledglings etc. During the study period, the care was taken to examine every event of the life of red vented bulbul. The red vented bulbul is generally monogamous. Hatching success has been recorded as moderate due to large scale losses of fledgling due to various environmental factors- high temperature, wind velocity, rainfall and availability of food material. During study period we observed 62.50% nests occupied

by 3 eggs and 37.50 % nests with 2 eggs. The variation of clutch size mainly depends upon availability of food material in breeding season. We observed 50% nests contain only eggs while 50 % nests with presence of hatchling and eggs both (Table-1). Number of young hatchling depend upon size of clutch. Variation in clutch size and breeding behaviour was observed directly in nest by using visual and camera capture. Total 42 eggs of red vented bulbul were recorded in 16 nests. The frequency of two eggs per nest 28.58% (12) and three eggs per nest 71.42% (30) nests were recorded (Table-2).

Table-1. Total number of eggs/ hatchling in the observed nests

Sr. no.	Clutch size variation in different nests	Status of nests
1	3	Only eggs present
2	2	Eggs and hatchlings present
3	3	Only eggs present
4	3	Eggs and hatchlings present
5	3	Only eggs present
6	3	Eggs and hatchling present
7	2	Eggs and hatchling present
8	3	Only eggs present
9	2	Eggs and hatchling present
10	2	Eggs and hatchling present
11	2	Only eggs present
12	3	Eggs and hatchlings present
13	3	Only eggs present
14	2	Eggs and hatchlings present
15	3	Only eggs present
16	3	Only eggs present

Table-2. Frequency of nest, Number of eggs and percentage of total eggs of Red vented bulbul during study time

Clutch size	Frequency of nest	Total number of eggs	%
2	6	12	28.58%
3	10	30	71.42%
Total nest	16	42	100%



Figure A- Egg and hatchlings of Red vented bulbul



Figure B- Two day hatchling



Figure C- Two hatchlings in nest



Figure D- Three hatchling and adult Red vented bulbul

References :

1. Berger, A.J. (1981). Hawaiian Birdlife Second edition. University Press of Hawaiian, Honolulu.
2. Hawai'i Audubon Society (1993) Cornell Laboratory of Ornithology.
3. IUCN Red List (2010). www.iucnredlist.org. IUCN Red List (November, 2010).
4. Linnaeus, Carl (1766). *Systema naturae : per regna tria naturae, secundum classes, Ordines, genera, species, cumcharacteribus, differentiis, synonymis locis* (in Latin) Vol. I, Part 1 (12th Ed.) *Holmiae* (Stockholm) *Laurentii Salvii* p. 295.
5. Long, John L. (1981). Introduced Birds of the World: The worldwide history, distribution and influence of birds introduced to new environments. Terrey Hills, Sydney: Reed. Pp. 300.
6. Nwe Nwe Khaing (2008). Breeding Ecology of Lesser Whistling Duck, *Dendrocygna javanica* Horsfield, 1821 at Paleik In. Ph.D thesis. Mandalay University. 52pp, 2008.
7. Vander Velde, Nancy (2002). The Red-vented bulbul has come to Micronesia. *Aliens* - Number 16 2002. ISSN: 1173-5988.