10. THE ECOLOGY OF THE BAYA IN RAJAMPET, CUDDAPAH DT., A.P.

(*With a map*)

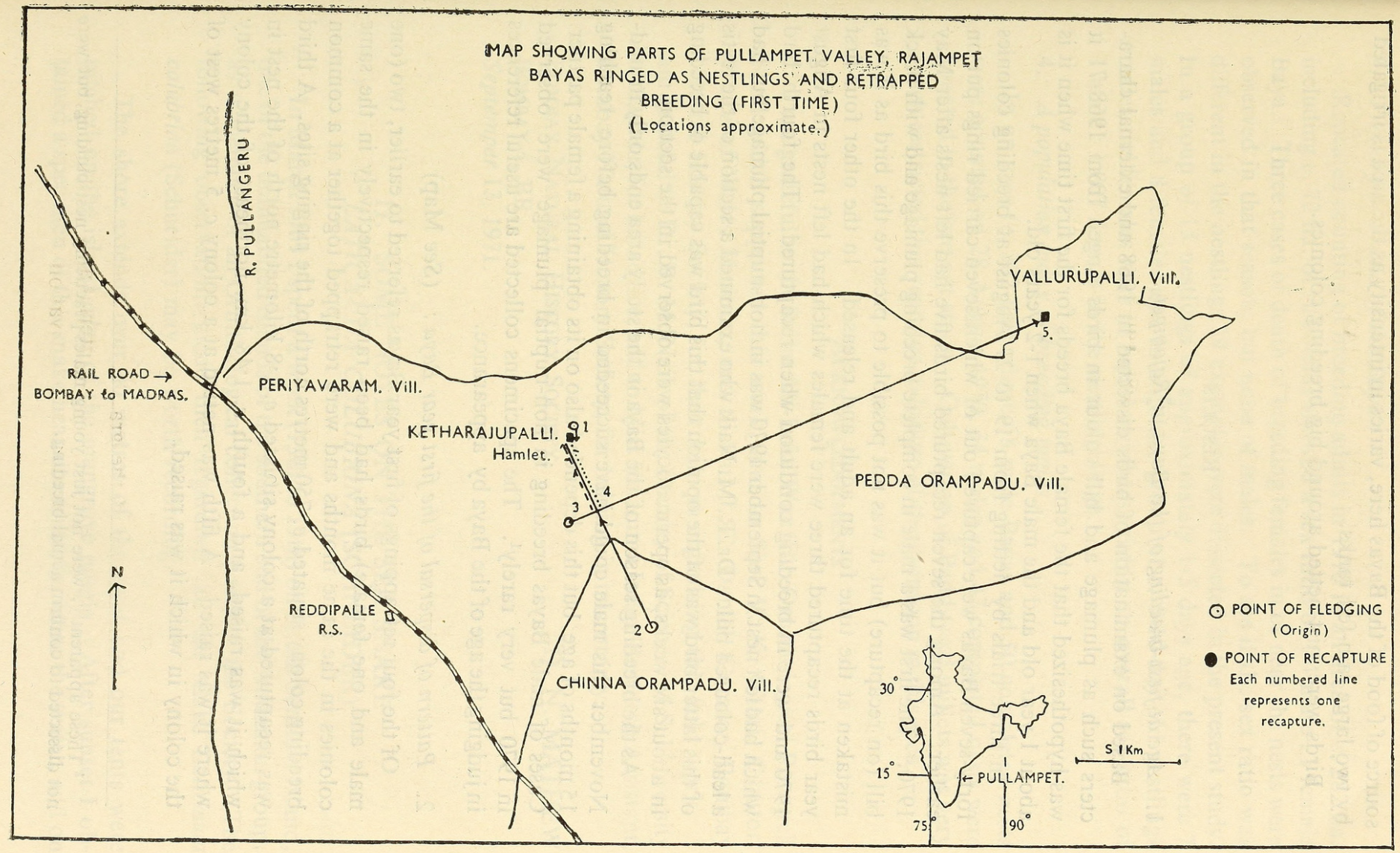
Introduction

While working on the ecology of the Baya (*Ploceus philippinus*) around Reddipalli (*c.* 14°N., 79°E.), Rajampet Taluk, Cuddapah Dt., I had ringed 460 nestlings and 1055 older birds of different ages of the Baya in five villages in the area, between 1968 April and 1971 February. As most of the nestlings were ringed in 1970 the age at first breeding of the Baya (in this area) could not be determined. The present study was aimed mainly at filling this gap in knowledge, but three other aspects namely the pattern of dispersal of the first year Baya, the primary sex-ratio of the Baya, and the population index on breeding Bayas of a restricted area near Reddipalli were also investigated to a limited extent.

Area of study

The area of work lies at points 1-5 kilometres east and northeast of Reddipalli Railway Station of Southern Railway. It is situated in the southern part of Cuddapah district, in the Pullampet valley which is a region of stratified rocks covered by river alluviums, blown sand, and gravel. Due to scanty annual rainfall the uncultivated parts can be called dry scrub jungle with shrubs like *Plectronia parviflora*, *Azima tetracantha*, *Ehretia microphylla*, *Fluggea leucopyrus*, *Gymnosporia montana*, *Acacia concinna*, and *A. leucophloea*. Dates, *Phoenix sylvestris* and *P. farinifera* grow wild in many places.

Paddy is the main crop of the area, but millets, groundnut, turmeric, castor, mustard, onion, mango, limes, sugarcane and betelvine are also grown. Paddy, millets and seeds of several species of Panicacea weeds provide a continuous supply of food to the Bayas and ringing showed these weaver birds to be resident in the area of study. Plantations of sugarcane, mango and betelvine and scrub jungles are used by the Bayas for roosting. Bayas nest in this area from mid-April to mid November, in colonies centered around wells, canals, in scrub jungle and gorges of hills. Nests are built on trees like *Phoenix* sp., *Syzigium jambolanum*, *Ficus religiosa*, *F. glomerata*, *Azadirachta indica* and *Pongamia glabra* and on thickets of *Lantana* sp., *Zizyphus jujuba* and *Acacia* sp. Leaves of *Phoenix* sp. were the chief source of material for nests but leaves of paddy, millets, coconut and the grass *Cymbopogon coloratus* were also used. Thus suitable nest-sites, nesting material and roosts are available throughout the year. However, the cultivation of paddy, the chief


MAP SHOWING PARTS OF PULLAMPET VALLEY, RAJAMPET
BAYAS RINGED AS NESTLINGS AND RETRAPPED
BREEDING (FIRST TIME)
(Locations approximate.)
R. PULLANGERU
RAIL ROAD →
BOMBAY to MADRAS.
PERIYAVARAM. Vill.
VALLURUPALLI. Vill.
KETHARAJUPALLI.
Hamlet.
PEDDA ORAMPADU. Vill.
CHINNA ORAMPADU. Vill.
REDDIPALLE
R.S.
N
POINT OF FLEDGING
(Origin)
POINT OF RECAPTURE
Each numbered line
represents one
recapture.
30°
15°
75°
90°
PULLAMPET.
5 1Km

source of food of the Bayas here, varies in intensity as the area is irrigated by two large rain-fed tanks.

Birds were mist-netted around big breeding colonies.

Results

1. *Age at first breeding of the Baya in Rajampet :*

Based on examination of birds dissected in 1968 and external characters such as plumage and bill colour in birds ringed from 1968-71 it was hypothesized that the female Baya breeds for the first time when it is about 1 year old and the male Baya when 1-2 years old.

In three trials by netting from 19 to 27 August at breeding colonies forty-seven Bayas were captured out of which seven carried rings put on earlier. Among the seven recaptured birds five had left nests after May 1970. The first was a male in complete breeding plumage and with black bill (on recapture) but it was not possible to preserve this bird as it was mistaken at the time for an adult and released. In the other four first year birds recaptured three were females which had left nests in August 1970 and were in breeding condition when recaptured. The fourth bird which had left nest in September 1970 was in non-nuptial plumage but had a lead-coloured bill. Dr. R. M. Naik who examined a section of the testis of this latter bird was of the opinion that this bird was capable of breeding in about six weeks, as spermatocytes were observed in the section.

As the breeding season of the Baya in the study area ends only in mid-November this male could have succeeded in breeding before reaching 15 months of age, but this depended also on its obtaining a female partner. Cases of male Bayas breeding in non-nuptial plumage were observed in 1970 but very rarely[1]. The specimens collected are useful references in judging the age of the Baya by appearance.

2. *Pattern of dispersal of the first year Baya :* (*See* Map)

Of the four retrappings of first year Bayas referred to earlier, two (one male and one female) birds had been raised respectively in the same colonies in the same months and were retrapped together at a common breeding colony situated *c.* 750 metres north of the ringing sites. A third was recaptured at a colony situated *c.* 1·8 kilometre north of the nest in which it was raised, and a fourth *c.* 1·48 km. northeast of the colony where it was raised. A fifth was netted at a colony *c.* 5 metres west of the colony in which it was raised.

[1] These apparently, were not just young males practicing nest-building, but were not dissected to confirm actual breeding.

3. *Primary sex ratio of the Baya :*

Repeated counting of breeding adults in 1970 in an area of *c.* 282 ha. including *c.* 72 ha. of rice-fields showed a sex ratio of 1·4 male : 1 female Baya. Three cases of death of breeding females in or near the nests were observed in that season, but none of males. To see if the sex ratio was different in the nestlings 29 examples were dissected in the present study. In a group of 15 nestlings of approximately 1-5 days age, there were 7 males and 8 females and in an older group of *c.* 5-10-day-old nestlings males and females were in equal numbers, giving an overall sex-ratio of 1 male : 1·007 female in the nestling stage.

4. *A population index of breeding males :*

In an area (*c.* 282 ha.) where 68 male Bayas and 50 completed nests were counted on 28 August 1970, 54 males and 47 completed nests were counted in the present study. Cultivation of Paddy and millets was very much restricted this year due to failure of the monsoon in this area.

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11. SOME NOTES ON THE SEA SNAKE *LATICAUDA COLUBRINA* (SCHNEIDER)

In March 1969 I spent a week (13th to 19th) on South Sentinel Island, one of the uninhabited islands of the southern end of the Andaman group, as a member of an Ornithological collection party of the Society. The following observations made then regarding the sea snake *Laticauda colubrina* (Schneider) may be worth recording.

The shore extends over 40 metres of the sand and our tents were pitched on the island edge of the mangrove jungle. After sunset I obtained a specimen of this snake near our tents, far from the water, and on