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RESEARCH NOTE

Ovarian response in female red headed bunting, *Emberiza bruniceps* under natural day length (NDL)

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Red-headed bunting, *Emberiza bruniceps* is a seasonal and under natural day length, captive bird which shows periodic cycles in gonadal growth and development (Jain and Kumar, 1995; Singh and Chandola, 1981).

The investigations pertaining to the photoperiodic phenomenon in avian reproduction and associated events are more extensively carried out in males compared to the females. This is a photoperiodic bird that follows the annual solar cycle for gonadal growth (Tewary and Tripathi, 1983).

Present Investigation was carried out with female red-headed bunting, *Emberiza bruniceps*, family Emberizidae; order Passeriformes. Female red-headed bunting is dull looking ashy brown head (above), buffish washed with yellow (below) and under tail coverts yellow. At Bhopal (India), birds are seen throughout the winter till spring (September/October to March and early April). Day time, birds are found in the crop fields and during night, they shelter in bushes, sugarcane field and on 'Babool trees', *Acacia arabica* (Personal observation).

Adult birds captured from the field and maintained under natural day length (NDL) in captivity at Regional Institute of Education, Bhopal (INDIA), fed with paddy grains and Kakoon and water *at libitum*.

During the study, birds were exposed to natural day length (NDL). In case of the experiments carried out under NDL, the birds were maintained in a room facing windows, through which normal day length is available from dawn to drusk. The periods of light and dark, were controlled by automatic time switches. The difference between room temperature and that of light boxes was noticed 2 to 2.5^{0}C.

The ovarian weights were assessed *in situ* by unilateral exploratory laprotomy. Ovarian weight was estimated by comparing the sizes of ovary with another standard set of fixed ovary of known weights.

Birds were maintained under natural day length (NDL) at Bhopal, India (Lat. 23^0 32' N Long 77^0 5'E) from April to March in each month between 15th and 20th day. The observations were made using five birds (N = 5).

In female bird, single ovary weight was recorded (Table 1). The ovarian weight was highest in the month of May, June and July. The ovarian response is a little delayed and growth started in the month of May. The value of the ovarian weight in the month of May and June was significantly higher than the often months of the year except July. The ovaries remained through the year except May, June and July (Fig. 1).

The significant changes which have been observed in the present study reveals a delayed regression patterns compared to the previous work (Tewary *et al.*, 1982; 1984, Tewary and Tripathi, 1983; Tripathi, 1987, 1989).