

ANIMALS USED, THEIR MAINTENANCE
AND LIGHTING SCHEDULES

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Adult Hemidactylus flaviviridis of both sexes weighing 10 ± 1 gms and measuring 80 ± 5 mm snout-vent length were obtained from a commercial supplier (M/s. Zoophyton, Baroda, India) and maintained on a diet of cockroaches for a period of 7 days for acclimation to the laboratory conditions.

Eight photoperiodic schedules were employed, namely, 1) continuous light (LL : 24L : OD) of high intensity - 2500 lux units; 2) continuous light (LL ; 24L : OD) of low intensity - 638 lux units; 3) 18 hours of light and 6 hours of darkness (18L : 6D); 4) 16 hours of light and 8 hours of darkness (16L : 8D); 5) 12 hours of light and 12 hours of darkness (12L : 12D); 6) 8 hours of light and 16 hours of darkness (8L : 16D); 7) 6 hours of light and 18 hours of darkness (6L : 18D); and 8) continuous (total) darkness (DD : OL: 24D). Photoregimens 3-7 were of high intensity - 2,500 lux units.

The cages housing the animals measured 18in.x 15in.x 10in. with one side made of transparent glass and ventilated on three sides. Each cage housed a total of 10 lizards balanced for size and sex. Food and water were provided ad libitum. The cages housing animals for the light experiments were placed (glass surface up) under suspended 40 - W fluorescent lamps, thereby facing the source of illumination. The inside of the wooden cages were lined with aluminum foil so that

lighting was direct as well as reflected. The distance from the fluorescent lamp to the glass surface of the cage was 15in. and to the floor level 25in. The light intensity was measured at the floor and reflecting surfaces of the cage using a luxmeter (Weston Electrical Instrument Corporation, NJ, USA). To obtain a high light intensity of 2,500 lux units, four fluorescent lamps were fixed and beamed together, and for the low light intensity of 638 lux units only one fluorescent lamp was utilized. The cages housing animals for the continuous (total) darkness (DD : OL : 24D) experiment were placed in a dark chamber completely shielded from light with opaque papers. Except for about 2 minutes daily exposure to dim light for taking measurements, animals in this experimental photoperiodic regimen were completely deprived of light. The source of the dim light used for taking measurements of animals in DD was a small red electric bulb which does not affect the pineal indoleamine biosynthesis. The animals of 18L : 6D, 16L : 8D, 12L : 12D, 8L : 16D and 6L : 18D were kept in the lighted chamber at 7 A.M. and were shifted into the dark chamber at the end of the respective lengths of exposure.

EXPLANATION OF PHOTOGRAPH

THE EXPERIMENTAL CAGE

A WOODEN CAGE WITH THE INSIDE LINED WITH ALUMINUM FOIL

DIMENSIONS OF THE CAGE

LENGTH - 45cm

WIDTH - 38cm

DEPTH - 25cm



CAGE

SECTION 1.

Influence of Light,
Pineal Organ and
Seasonal Variations in
Temperature on
Lacertilian
Tail
Regeneration.