

## CYTOLOGICAL APPRAISAL OF A BEE EATER, *MEROPS ORIENTALIS*

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The present communication covers certain cytological aspects of a Coraciiform bird, *Merops orientalis*. Chromosome preparations were obtained from bone-marrow cells, following the air-drying technique of Rothfels & Siminovitch (1958) with certain modifications (Jaitly & Garg, 1992). Based on the criterion of arm ratio/centromeric index, chromosomes were classified according to the scheme proposed by Levan et al. (1964).

The bone-marrow cells of five male and three female specimens yielded thirty two well spread metaphase plates for cytological investigation. The diploid count varied between 80 and 85 with the most prominent peak at 82. There were 17 pairs of macrochromosomes, divisible into three groups : metacentric {only Z}, sub-telocentric {8 pairs} and telocentric {8 pairs}. Z was found to be the largest chromosome ( $L^R = 9.54\%$ ), whereas W was a sub-metacentric chromosome, measuring 3.99%.

The remaining 24 pairs, most of them were either telocentric or acrocentric, together constituted 28.98% of Total Chromosomal Length.

Key words : Chromosome, Karyotype.

### References :

- **Garg, HK** (2016) An Empirical Technique to resolve banding sequences in avian chromosomes. E-Anveshan : Multidisciplinary Journal of Sarojini Naidu Govt Girls PG Auto College Bhopal 2(3) : 45-49.
- **Garg, J** ; Bharadwaj, AK; Garg, HK (2005) Genetic variability as a proof of biodiversity in *Tephrosia*. *National Symposium on Recent Trends in Animal Reproduction : A Special emphasis on Biotechnology*.
- **Garg, HK**; Garg, J ; Jain, OP (2005) Diakinetik configuration of genome in *Megalaima zeylanica caniceps* (Franklin): A probable case of translocation heterozygosity. *M.P. Science Congress*, 247-248.
- **Garg, HK**; Garg, J (2012) Genetic Reorganization in *Treron phoenicoptera*. **International Conference on Development and Prosperity of Nation through Young Minds**, 68.

- **Garg, HK;** Garg, J (2009) Chromosomal Heteromorphism in *Treron Phoenicoptera*. *National Symposium on Environmental Threat to Human Health in 21<sup>st</sup> Century*, Banaras Hindu University.
- **Garg, HK;** Garg, J (2006) Cytological investigation of a bee-eater, *Merops orientalis*. *National Symposium on Recent trends in Life Sciences*.
- **Garg, HK;** Garg, J (2005) Genetic make-up of a Passerine bird, *Sturnus contra*. *M.P. Science Congress*, 245-246.
- **Garg, HK ;** Garg, J (2003) Chromosomal aberration in a piciform bird, *Megalaima zeylanica caniceps* (Franklin). **Indian Journal of Applied & Pure Biology**, **18(2)** : 135-140.
- **Garg, HK ;** Garg, J (2002) Cytochemical differentiation in chromosome complement of *Megalaima zeylanica caniceps* : An evidence of reciprocal translocation. **Journal of Ecotoxicology & Environmental Monitoring**, **12(1)** : 3-8.
- **Garg, HK;** Garg, J (2002) Karyological study on Kingfisher, *Ceryle rudis*. *National Seminar on Biodiversity & Sustainable Use of Bioresources*, 38.
- **Garg, HK;** Garg, J (2002) Genetic diversity between two congeneric species of the genus *Megalaima*. *National Seminar on Biodiversity & Sustainable Use of Bioresources*, 39.
- **Garg, HK;** Garg, J (2002) Inversion polymorphism in Himalayan green pigeon, *Treron phoenicoptera* (Latham). *National Seminar on Environment Toxicology*, 2/7.
- **Garg, HK;** Garg, J (1997) Simple technique to resolve linear discrimination in avian chromosomes. *National Symposium on Biodiversity*, 28.
- **Garg, HK;** Jain, OP; Garg, J (2005) Protocol for demonstration of constitutive heterochromatin in avian chromosomes. *M.P. Science Congress*, 245.
- **Garg, HK;** Shrivastava, A (2013) Genotype study of *Sturnus contra*. **Global Journal of Biology, Agriculture & Health Sciences** 2(4) 124-126.
- **Garg, HK;** Shrivastava, A (2013) Genetic Blue-print of the Northern Green Barbet. **Indian Journal of Applied Research** 3(9) 41-42.
- **Garg, HK;** Shrivastava, A (2013) Meiotic evidence for reciprocal translocation in *Megalaima zeylanica caniceps*. **International Journal of Innovative Research & Studies** 2(10) 562-566.
- **Garg, HK;** Shrivastava, A (2013) Chromosome complement of Crested Bunting & Gold Fronted Chloropsis **International Journal of Fauna & Biological Studies**, 1(1) 52-54.
- **Garg, HK;** Shrivastava, A (2013) Mitotic profile of genome in *Turnix susicator*. **International Journal of Pharmaceutical Research & Bioscience, USA**. 2(4) 411-414.
- **Garg, HK;** Shrivastava, A (2013) Genetic surveillance of king-fisher & bee-eater. **Global Journal of Research Analysis, International** 2(9) 5-7.
- **Garg, HK;** Shrivastava, A (2013) Genetic reorganization in *Treron phoenicoptera*. **International Journal of Entomology & Zoology Studies** 1 (4) : 66 - 72.
- **Garg, HK;** Shrivastava, A (2013) Cytological study of *Emberiza melanocephala*. **International Journal of Advanced Life Sciences**. 6(4) 273-276.

- **Garg, HK;** Shrivastava, A (2013) Genetic organization of *Motacilla flava*. **International Journal of Scientific & Technology Research, France** 2(9) 27-29.

