

An Observation on Melanistic form of Indian Blue Rock Pigeon (*Columba livia*) in Udhagamandalam, Nilgiris

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Udhagamandalam is a town, a municipality, and the district capital of the Nilgiris in the Indian state of Tamil Nadu. Udhagamandalam features a subtropical highland climate under Köppen climate classification and pleasantly mild conditions throughout the year. However, night hours during January and February is typically cold. Temperatures are relatively consistent throughout the year; with average high temperatures ranging about 17–20 °C and average low temperatures between approximately 5–12 °C.

On 11th January 2016, 3.30 PM we observed a flock of Blue rock pigeons roosting on the top of a building. Certainly a particular pair grabbed our attention during their mating behaviour and that pair was completely dark in colour and differ from the normal colour of the Blue rock pigeon usually characterized by uniform blue plumage and two bars on each wing (Fig 2). Based on the literature we found that it is a melanistic Blue rock pigeon (Fig 1). There are earlier reports on melanism in Rock pigeon (Obukhova and Kreslavskii, 1984; Obukhova and Kreslavskii, 1985a,b; Petersen Botni and Williamson, 1949; Tomasz and Anna, 2008 and Janiga, 1991a,b). Johnston and Janiga (1995) observed that melanistic birds occur with greater frequency than blue-bars at higher latitudes. The causes for plumage variability among populations are poorly known. In Rock pigeons genetic factors are decisive in determining plumage patterns and colour frequencies (Janiga, 1991 & Johnston and Janiga 1995). According to Lofts *et al.* (1966), melanistic birds are seen more often in cities because of their gonads are active even in winter, as opposed to blue-bars. In effect, melanistic birds can also breed in winter, allowing them to produce more progeny during a longer breeding season.

References

Janiga, M. (1991a) The study of plumage polymorphism and ornithosis in feral pigeons (*Columba livia*). (In: *Nestling mortality of granivorous birds due to microorganisms and toxic substances*, Eds. J. Pinowski, B.P. Kavanagh and W. Gorski) – Proceedings of International Symposium of the Working Group on Granivorous Birds, INTECOL. Warszawa.

Janiga M. (1991b). Colour polymorphism in Feral Pigeons (*Columba livia* Gm. 1789) – Acta F. R. N. Univ. Comen. – *Zoologia*, 34: 31–36.

Johnston R. and M. Janiga (1995). *The Feral Pigeon*, Oxford University Press, London.

Lofts, B., R.K. Murton and N.J. Westwood (1966). Gonadal cycles and the evolution of breeding seasons in British *Columbidae* – *J. Zool., Lond.* 150: 249–272.

Obukhova, N.Y. (2007). Polymorphism and phene geography of the blue rock pigeon in Europe *Russian Journal of Genetics* May 2007, Volume 43, Issue 5, pp 492–501



Fig. 1. Melanistic Blue Rock Pigeon. Photo: S. Karthick



Fig 2. Normal Blue Rock pigeon. Photo: S. Karthick

Obukhova, N.Y. and A.G. Kreslavskii (1984). Plumage variation in rock doves (*Columba livia*) *Zool. Zhurnal*, 63: 233–244.

Obukhova, N.Y. and A.G. Kreslavskii (1985a). Colour variation in city populations of *Columba livia*. Possible mechanism for maintaining polymorphism *Zool. Zhurnal*, 64: 1685–1694.

Obukhova, N.Y. and A.G. Kreslavskii (1985b). Urban melanism in rock-doves (*Columba livia*). A comparative demography of one colony *Zool. Zhurnal*, 64: 400–408.

Petersen Botni, N.F. and K. Williamson (1949). Polymorphism and breeding of the Rock Dove in the Faeroe Islands *Ibis*, 91: 17–23.

Tomasz, H. and J. Anna (2008). Plumage polymorphism and breeding parameters of various feral pigeon (*Columba livia* gm.) morphs in urban area (Gdańsk, North Poland) *Polish Journal of Ecology*. 66 (4): 683–691

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