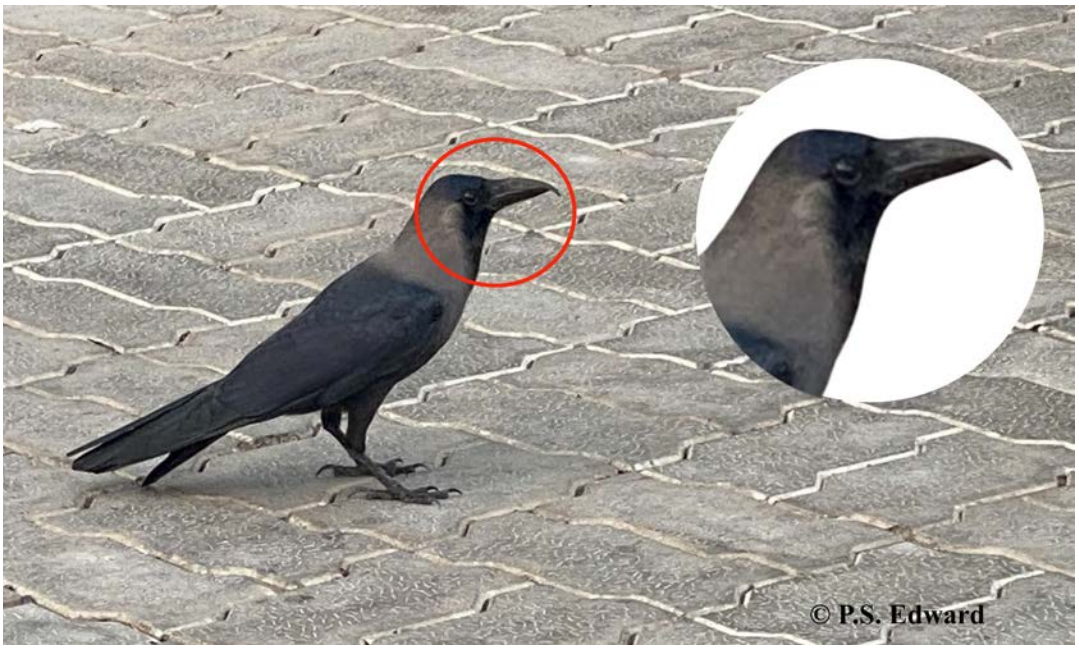
Observation of beak deformity in a House Crow in Chennai, India



A House Crow showing an elongated and downcurved upper beak. © P.S. Edward.

Beak deformities in birds are generally rare, but when they occur, they can significantly impact a bird's survival and fitness (Handel et al. 2010). In recent decades, an alarming increase in such deformities has been documented across various species and regions. Affected birds often exhibit an overgrown, elongated beak (particularly the upper mandible) that may curve abnormally or cross over the lower mandible (Pomeroy 1962). This condition is referred to as Avian Keratin Disorder (AKD). AKD has been observed in various bird families, with corvids, parids, and raptors being among the most affected. Such deformities have been documented in several bird populations globally (Pourlis 2011).

On 2 April 2025, an individual House Crow *Corvus splendens* exhibiting an apparent beak deformity was observed in an urban locality of Chennai, Tamil Nadu, India (13.004, 80.238).

The most striking feature was its overgrown upper beak, which extended well beyond the tip of the lower beak and curved slightly downward. The lower mandible of the observed crow appeared normal in length, whereas the upper mandible was disproportionately long.

No other obvious physical abnormalities, such as plumage discoloration or injured limbs, were noted in this individual. The crow was observed foraging on the ground, picking at food scraps on a paved surface. Despite the deformity, it could peck and grasp food, albeit with noticeable difficulty. In the present case, the upper beak's curvature was downward (hook-like). Importantly, such deformities

usually involve the keratin layer rather than the underlying bone structure of the beak. The possible cause of such avian beak deformities has been investigated by researchers but remains only partially understood. Early hypotheses centred on factors such as genetic defects, injuries, or exposure to pollutants, but many cases did not fit these explanations neatly (Pourlis 2011; Handel & Hemert 2015). House Crows often forage in garbage dumps and sewage outlets, potentially ingesting or contacting these contaminants. While direct evidence linking pollutants to beak deformities in House Crows is not yet available (Hemert & Handel 2010), the polluted water body where deformed crows in Nagpur were feeding was suspected as a factor (Kasambe et al. 2009).

Additionally, malnutrition or specific nutrient deficiencies could conceivably lead to poor beak condition or abnormal growth (Demir & Özsemir 2021). Birds subsisting on imbalanced diets, such as predominantly human refuse with low nutrient content, might develop abnormalities. However, conclusive evidence links nutritional deficiency alone to AKD (Burt et al. 2021). This rare observation shows how urban wildlife can adapt to physical impairments. It also highlights the importance of monitoring urban bird populations as indicators of environmental change.

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