

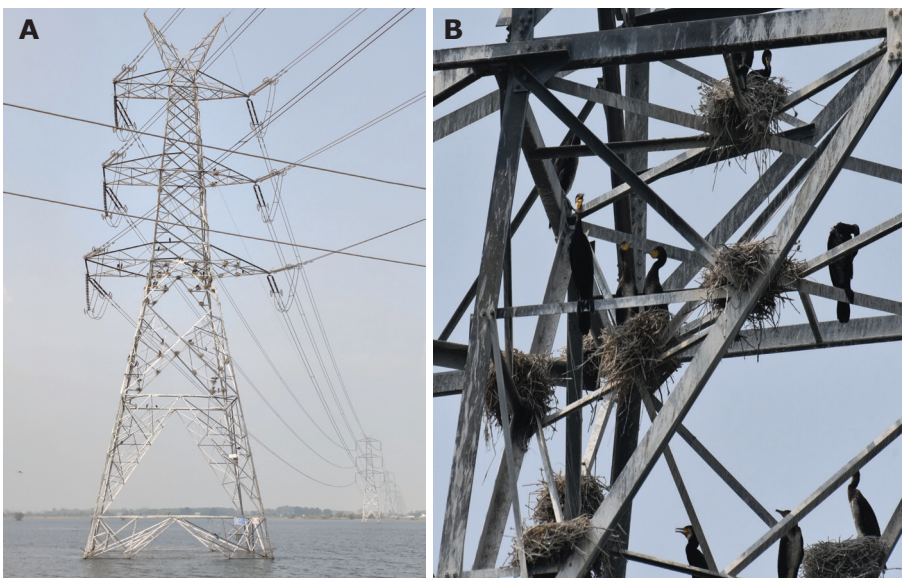
Transmission line pylons supporting Great Cormorant nesting in Tamil Nadu

Utilization of human-made structures by birds for nesting has increased in recent years, largely driven by the decline of natural nesting sites in favourable habitats (Mainwaring 2015). Birds now frequently nest on a variety of artificial structures, including houses, uninhabited buildings, metal pipes in fences, and transmission towers (Lesinski 2000; Soldatini et al. 2008; Janiszewski et al. 2015), none of which are intended to serve as nesting sites for these species. The availability of these artificial structures in regions with limited nesting opportunities can ultimately support species conservation (Mainwaring 2015).

The Great Cormorant *Phalacrocorax carbo* is a widely distributed species found across much of the world, comprising several subspecies. This broad distribution, along with the presence of different subspecies, leads to diverse nesting site selection behaviours. On 25 January

2023, while traveling from Kanchipuram to Arakkonam on State Highway 58, approximately 17 km from Arakkonam and 12 km from Kanchipuram (12.934° N, 79.677° E), a flock of Great Cormorant *Phalacrocorax carbo* nests was observed on a 400 kV transmission pylon about 100 m from the road, within a wetland. This wetland, located in Kanchipuram District is surrounded by paddy fields. Further investigation revealed additional nests on an adjacent pylon approximately 400 m from the first pylon.

On these two transmission pylons, a total of 59 Great Cormorant nests were observed. On the first pylon 24 nests were observed to be active, with juveniles and adults, while 22 nests were abandoned. The second pylon had 13 nests, with only three active. In total, 89 Great Cormorants, including both juveniles and adults, were counted in the wetland at that time.



A—Transmission pylons on the wetland, with nests of Great Cormorants *Phalacrocorax carbo* | B—Great Cormorant adults attending to chicks in nests on a transmission pylon. © Frank & Alex

According to local sources, Great Cormorants began nesting on the transmission pylons in 2021. Initially, they used only one tower farther from the bund, but from 2022, they started utilizing both the towers for nesting and roosting. Besides Great Cormorants, other heronry birds such as Spot-billed Pelican, Eastern Cattle-Egret, Indian Pond-Heron and Oriental Darter were observed foraging in the wetland.

Colonial nesting waterbirds (heronry birds) mostly breed in single or mixed species colonies across different habitats, predominantly in wetlands with vegetation. In India, colonial nesting waterbirds such as the Red-naped Ibis, have been reported nesting on transmission pylons in Gujarat and Rajasthan (Ali et al. 2013; Sangha 2013). Similar use of transmission lines for roosting by cormorants and pelicans has also been observed in Pallikaranai Marshes. In Tamil Nadu, while most colonial waterbirds breed in trees, some species like Spot-billed Pelican and Painted Stork have been observed using artificial structures, especially in well-managed wetlands (Frank & Gopi 2021).

A study conducted by Frank et al. (2021) on heronry birds nesting across Tamil Nadu reports the breeding of Great Cormorants in five heronries across five districts of the state, three of which are located in protected areas. In Tamil Nadu, Great Cormorants predominantly nest on tree species such as *Vachellia nilotica*, *Eucalyptus globulus*, and *Borassus flabellifer*. Breeding of heronry birds in Tamil Nadu mostly coincides with the onset of north-east Monsoon (October–December), and extends until April,

depending upon wetland inundation patterns and availability of food resources. Monitoring the breeding behaviour of Great Cormorants and other colonial nesting waterbirds is crucial for understanding the role of artificial structures in their nesting ecology. Such insights will be valuable in shaping future conservation and management strategies.

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