OBSERVATIONS ON FACTORS AFFECTING MORTALITY, MEMORY AND SITE SELECTION OF GIANT ROCK BEES IN INDIA

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Giant Rock Bees, *Apisdorsata*, are found aplenty in India both in plains and on hills. They are known to build nest on tall trees in relevance to wind direction (Nandi and Mahabal, 1974). They are found to die due to prolonged exposure of artificial light (Nandi, 2025). As such, in this communication an interpretation is made towards understanding factorslike site selection, mortality, lacking of memory in Giant Rock bees. Death due to artificial light attraction and others factors are brought under this communication as these are vital towards their existence as pollinators of plant species on earth for agricultural growth, food production, and humanity.

The relevant observations are as follows: i) Rock bees build nest on tall buildings and tall trees, as well as in bushes (Nandi, 2025; Nandi and Mahabal, 1974; Pramanik, 2014), ii) Prolong artificial light attraction causes death (Nandi, 2025), iii) Bees build nest repeatedly in the same place ignoring their death and mortality (Nandi, 2025), iv) Ignoring mortality is inferred herein as indicative of ill memory for existence in life, v) Selection of site like College building of Hili, DakshinDinajpur, West Bengalis indicative of mustard cultivation nearby. They build nest repeatedly in the same place was observed in 1970s in Pune, Maharashtra and in 2020s in Bengaluru, Karnataka. Mortality due to prolong artificial light at night in Bengaluru megacity during monsoon rains due to stair case lighting and during Diwali celebration (Nandi, 2025). Rock bees of Sundarban mangrove forest build hives in bushes in early honey harvest season (March end/ early April) and in higher mangrove branches in April-May, *i.e.*, mid to late harvesting season (Pramanik, 2014) in relation to environmental factors like wind and air temperature. However, apparently they do not have memories to make wise approach to avoid artificial light attraction for their existence!

Figs. 1-3. Death due to artificial light (Figs. 1-2) and two hives on a tall building (Fig.3).

Our observations and literature suggest that: i) Rock bees die due to prolonged impact of artificial light was observed in Karnataka, India, ii) They build hive in relevance to wind direction as noted in Poona, Maharashtra, iii) They construct hive at lower height in bushes and in relatively higher branches of trees in the Sundarban mangrove forest in relation to wind and air temperature (Pramanik, 2014), iv) Environmental threats faced by Giant Rock bees are varied and unable to transmit to worker bees and/ or to next generation, v) Apparently, they are unable to memorise or communicate incidences as in ants and higher vertebrates. Thus, it seems that Rock bees face environmental challenges including human impact head on without memorising or carrying forward to worker bees or to hive mates.

CONCLUDING REMARKS

Challenges faced by Giant Rock bees are usually linked to environmental stressors and human induced environmental factors, presumably due to under developed brain matter and not related to lacking of memory as they are invertebrates with lower brain power.

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