

FAUNAL DIVERSITY DOCUMENTATION STUDY AT CHEMFAB ALKALIS Ltd. (CCAL) CAMPUS, KALAPET, PUDUCHERRY

Final Report Submitted to
Chemfab Alkalies Ltd., Puducherry



Sálim Ali Centre for Ornithology and Natural History

(A Centre of Excellence under the Ministry of Environment, Forest & Climate Change, Govt. of India)
Anaikatty (P.O), Coimbatore - 641108

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EXECUTIVE SUMMARY

We conducted a six month study at Chemfab Alkali Ltd. campus at Kalapet, in Puducherry to systematically document the faunal diversity in the vegetated land area surrounding the chemical industry, protected and maintained by Chemfab. The total campus area is 37 acres, of which, only 09 acres is occupied by the chemical plant. The faunal groups documented were mammals, birds, reptiles, amphibians, butterflies, dragonflies, spiders, and ants. Fixed radius point count method was followed for sampling birds and butterflies to calculate the density and diversity. Other faunal groups were recorded only opportunistically.

- Overall, we recorded 108 faunal species (41 birds, 37 butterflies, four mammals, four reptiles, two amphibians, six dragonflies, eight spiders, six species of other insect groups).
- The Chemfab's industrial campus had an overall avian density of 63.96 individuals/ha (25.88/Acre) during the study period with a Shannon diversity index (H') of 2.51. The Shannon diversity index (H') for butterflies was 2.87.
- The bird assemblage of the Chemfab campus also included rare and uncommon species which generally prefer less disturbed areas (E.g. Asian Brown Flycatcher, Black-naped Oriole, and Forest Wagtail)
- The butterfly assemblage of the campus also had rare and protected species. Five species of butterflies recorded belonged to Schedule I and Schedule II (Part II) according to the Indian Wildlife Protection Act (1972) of Government of India (WPA, 1972). All the avian species belonged to Schedule IV except Shikra and Black Kite. Among the mammals, Bonnet Macaque and Indian Grey Mongoose belonged to Schedule II of Part I (WPA, 1972).
- The high abundance and diversity of the butterflies indicated a healthy ecosystem, since they maintain the ecosystem health by acting multiple roles in the system such as, pollinators, prey and aesthetic objects. They are good indicators of environmental quality. The study showed that Chemfab campus has a well maintained heterogeneous vegetation cover that supported a wide variety of avian species of different feeding guilds.

- Given the availability of adequate woody vegetation, understory cover and a well-protected boundary wall, we suggest the installation of artificial nest boxes and bird feeders which can shelter and support better bird fauna in different seasons.
- The existing herbaceous/grass cover and open canopy patches should be conserved to attract butterflies. The herbal garden may be expanded to include a section for butterfly host plant species as well to support diverse species of butterflies.
- Creation of an open waterbody within the campus can attract and support more biodiversity including additional aquatic species to the campus and thus can contribute significant further additions to the biodiversity of the campus.
- As the Chemfab campus already has good diversity of butterflies, it is ideally suited for developing a small butterfly garden through proper plantation of larval host plants (LHP) and adult feeding plants for further enhancing the butterfly community.
- The healthy faunal diversity flourishing within the CCAL campus is an indicator of the operational excellence of the plant over the past 32 years. Results of the study vindicates the environment-friendly actions of the CCAL towards the conservation of its campus greenery and biodiversity and its long-term commitment towards sustainable development and provides CCAL further strategic insights into possible interventions for further improvement of the faunal diversity of the campus.