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Increasing the Biodiversity of Habitats around Sri Lankan Railway Systems**Wanigasooriya, D.A.****Young Biologists' Association of Sri Lanka***dulyanaastro02032004@gmail.com***Abstract**

The increasing fragmentation of natural habitats in Sri Lanka due to urbanization and infrastructure development has left vast stretches of land underutilized and ecologically degraded, such as the spaces to the sides of the railroads. This is quite evident in the Kelani Valley Line, where from Maharagama to Maradana most of the spaces adjacent to railroads are either infrastructure, including illegal settings, or spaces overrun by weeds. The focus of this study is to assess the effectiveness of rewilding these empty spaces along railroads to restore urban biodiversity and mitigate the environmental impact of transportation networks. To assess the potential for rewilding, a biodiversity survey was conducted along the 1.2-kilometer railroad corridor between Nawinna and Maharagama railway stations. The methodology involved detailed observation and documentation of flora and fauna surrounding the railway, with species identification supported by the citizen science platform iNaturalist. Surveys were conducted over two months from September to October 2024. Results showed that the floral community with more than 50 plant species located near the railroad comprises a mix of introduced species accounting for 65% of the flora species identified (Eg: *Senna occidentalis*, *Xanthosoma sp.*, *Euphorbia sp.*, *Tridax sp.*, *Syngonium sp.*, *Asystasia sp.*, *Mikania sp.*) and some native species that accounted for 20% of the plant species (Eg: *Colocasia sp.*, *Commelina sp.*, *Terminalia sp.*, *Ficus sp.*, *Macaranga sp.*) found, which are abundant in urban habitats, with the rest being cultivated plants (Eg: *Coffea arabica*, *Carica papaya*, *Canna sp.*). In addition to the flora, the railroad habitats also hosted a range of native fauna, which included native grasshoppers (*Oxya sp.*), orb-weaving spiders (*Argiope aemula*), and seed-eating birds such as munias (*Lonchura sp.*). Vegetation extended to approximately 1-2 meters to the Railway roadside from the railroad, and 5-8 meters to the opposite side, consisting of mostly neglected landscapes of overgrown weeds mentioned above. Challenges included difficulties in accessing certain overgrown areas, while certain sections of the surveyed railroad corridor were entirely cleared of vegetation, resulting in the absence of any observable flora or fauna. Despite these hurdles, with these data gathered at surveys, it is possible to conclude that spaces near railroads are often dominated by invasive weeds and common fauna associated with degraded urban ecosystems. Thus, there is the opportunity to improve upon these spaces by potentially replacing their mostly introduced floral communities with native plants that can sustain native, yet persistent ecosystems with higher diversity.

Keywords: *Rewilding, Urban biodiversity, Invasive species, Railroad ecology, Ecological restoration*