SUPPORTING INFORMATION

Median Lichen Thallus Area

To determine the cell size for the grids used to quantify the lichen occurrences, we quantified the thallus size of the largest and most abundant species, *Xanthomendoza galericulata*. On each of 73 trees a total of 10 thalli of *X. galericulata* were randomly selected. The area of each thallus was measured using the length of across the largest possible measurement from the margin of one-side to the opposite margin and the length of a line perpendicular to that from margin to margin. These two measurements were then used to calculate the area of an ellipse (Area = $\pi(l_1 \dot{l}_2)$), which was used to approximate the area of the thallus. The median thallus size was then calculated from the 10 area measurements for each tree. The median lichen thallus area of the was less than 0.1 cm^2, and rarely did the median thallus area exceed 0.5 cm^2 (Fig. 1).

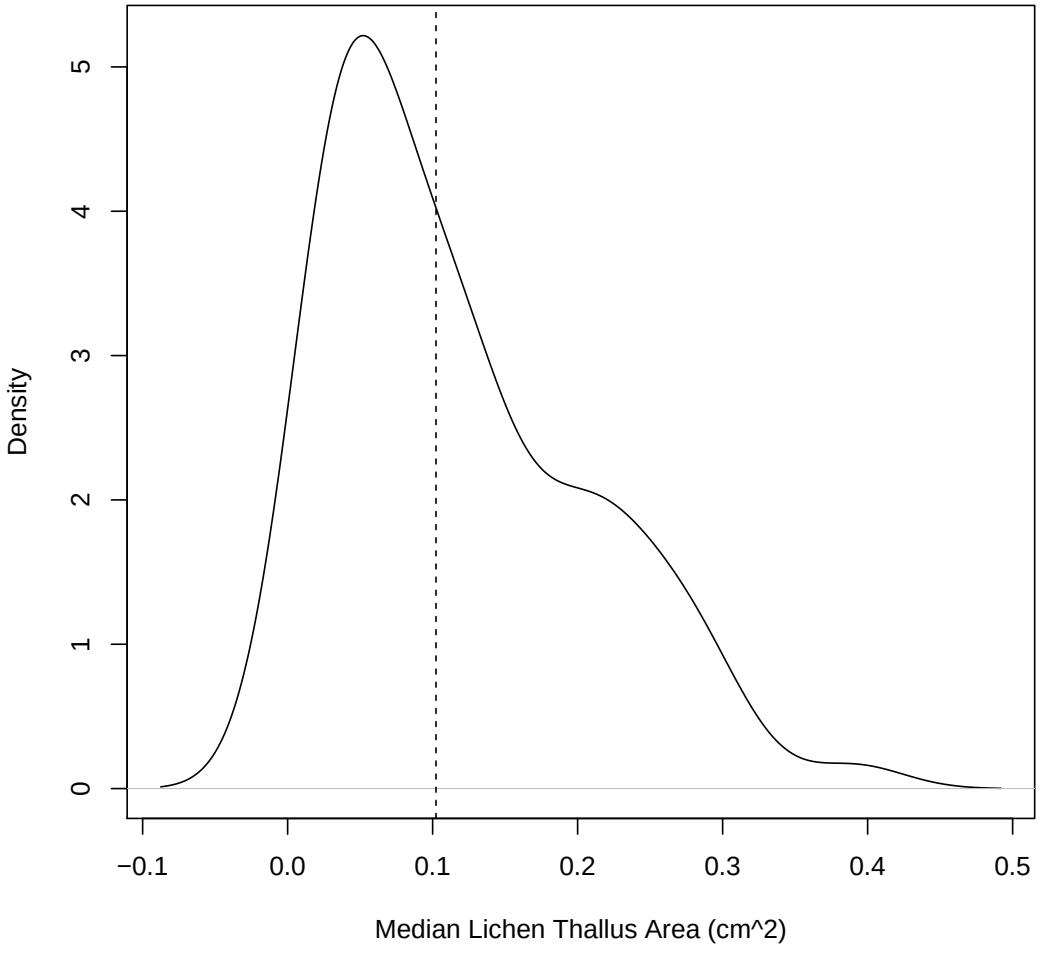

Figure 1. Density plot of the median lichen thallus area (cm^2).

Species Level Network Analysis

We examined the centrality of individual species in lichen networks. The species centrality did not respond to genotype for any of the species examined (REML: *X. galericulata p-value* =

1.0000; *Candaleriella subdeflexa p-value* = 0.2973; *Lecanora* spp. *p-value* = 0.4616; *Calplaca holocarpa p-value* = 0.0729; *Rhinodina* sp. *p-value* = 0.4576). However, the relative centrality did vary among the lichen species (Fig. 2). *Candaleriella subdeflexa* was generally the most central species having the highest average centrality (0.73), followed by *Ca. holocarpa* (0.54) and *Lecanora* spp. (0.40). The centralization of the remaining species were *R.* sp. (0.18), *X. galericulata* (0.14), *P. melanchra* (0.08), *X. montana* (0.06) and *Ph. undulata* (0.02). *Physcia adscendens* was generally not connected to other species in the networks and had a centralization score of zero.

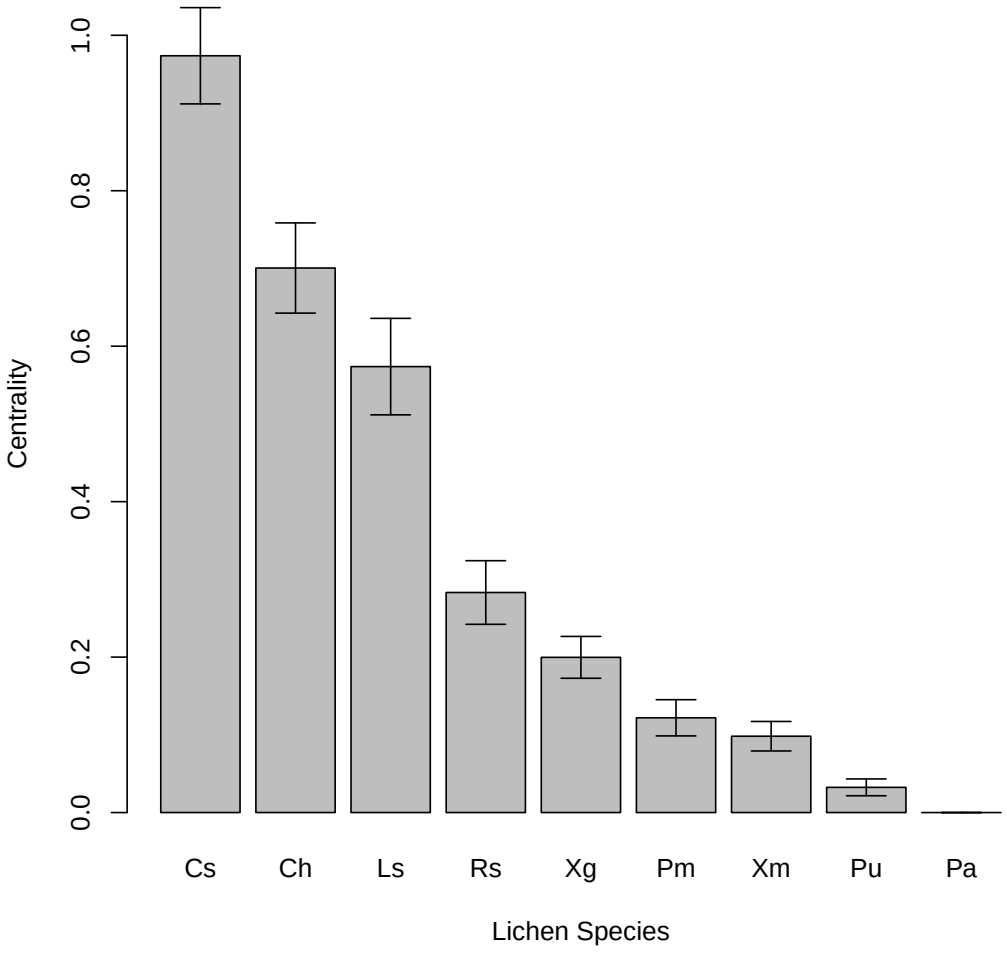

Figure 2. The relative centrality varied among the species of lichen observed in the common garden. Barplot showing the mean centrality ($\pm$ 1 S.E.) of the lichen species averaged across all trees that were observed.