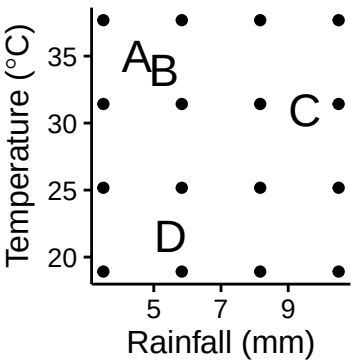

Figure 1: Attribute space example. This environmental attribute space has dimensions relating to annual temperature (°C) and rainfall (mm). Letters denote the environmental conditions associated with the geographic locations where four hypothetical populations are found. Points represent demand points. In this space, populations close to each other inhabit similar environmental conditions.

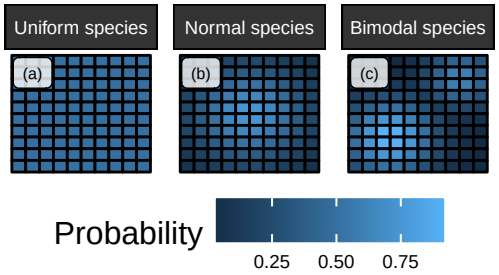

Figure 2: Distributions of three simulated species. Squares denote planning units. Colors indicate probability of occupancy.

Figures

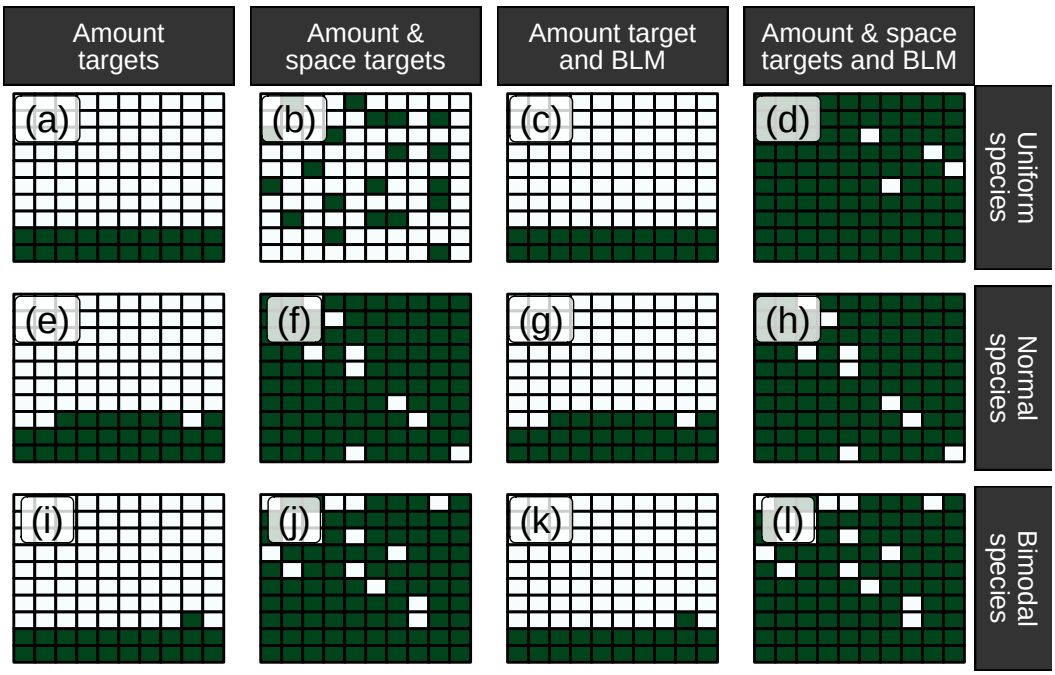

Figure 3: Prioritizations for the simulation study. Each panel shows a prioritization generated for a single species using a set of parameters. Squares denote planning units. Dark green planning units were selected for protection. Each row of panels show prioritizations generated for a different species. Each column of panels corresponds to a different set of parameters used to generate the prioritization.

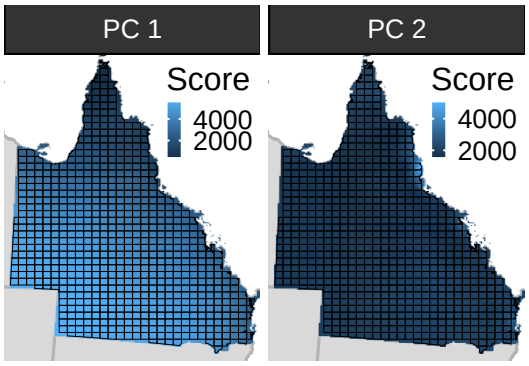

Figure 4: Two main gradients of climatic variation across Queensland, Australia. Polygons denote planning units.

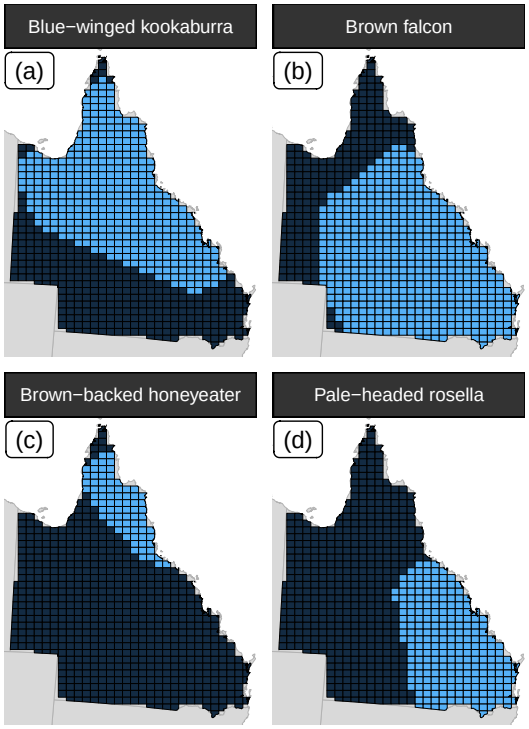

Figure 5: Distribution of the species used in the first case study. Polygons denote planning units. Planning units occupied by a given species are shown in light blue.

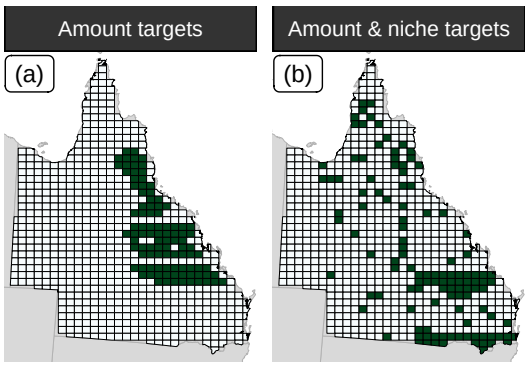

Figure 6: Prioritizations for the first case study. Polygons denote planning units. Dark green planning units were selected for protection. Panel (a) shows the solution generated when using 20 % amount targets. Panel (b) shows the solution when using 20 % amount targets and -1e+06 % niche targets.

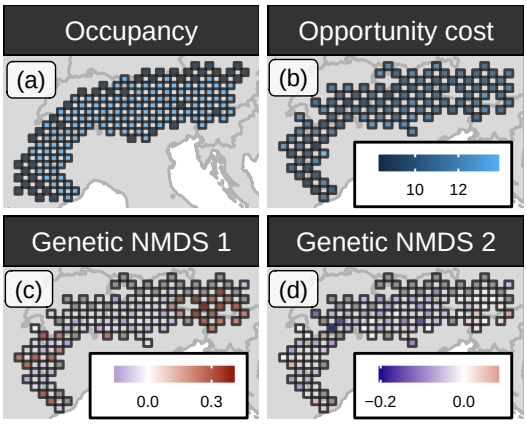

Figure 7: Data used for the second case study. Squares denote planning units. Panel (a) shows all grid cells surveyed by the IntraBioDiv project. Grid cells occupied by the betony-leaved rampion are shown in bright blue. The subsequent panels contain only show occupied grid cells. Panel (b) shows the acquisition cost of each planning unit (estimated as the total human population density). Panels (c–d) show the spatial distribution of the ordinations describing genetic variation. These values describe the typical genetic characteristics of individuals in each planning unit. Planning units with similar values/colors contain individuals with similar loci polymorphisms.

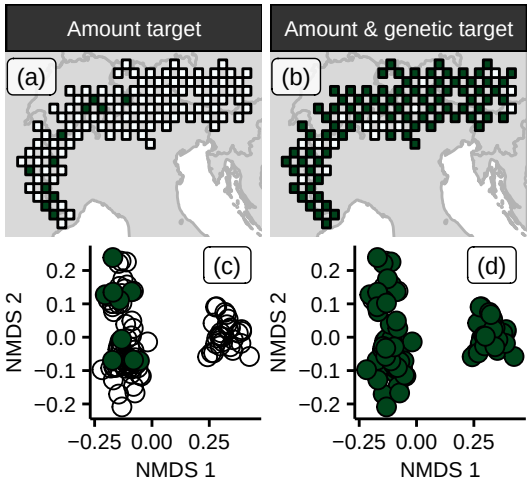

Figure 8: Prioritizations for the second case study. Panels (a–b) show prioritizations generated using different parameters. Polygons denote planning units. Dark green planning units were selected for protection. Panel (a) shows the planning units selected when using 10 % amount targets. Panel (b) shows the planning units selected when using % amount targets and 85 % genetic targets. Panels (c–d) show the solutions in the genetic space. Each point corresponds to a planning unit. The coordinates of the points represent the typical genetic characteristics of individuals sampled in that planning unit (based on an NMDS of the binary loci data). Planning units associated with points that are closer together contain individuals with more similar genetic characteristics than planning units that are further apart.