## **Highlights**

- \* We build on recent studies to show how hierarchical networks can provide a framework for improving the study of the interplay between ecological and evolutionary processes.
- \* In this framework, interaction strength between species depends on ecological and evolutionary processes underlying complex traits and trait distributions, intraspecific niche width, and the interaction with either common or rare phenotypes.
- \* This approach illustrates broad classes of interactions between complex trait distributions and trait change and the complexity and stability of ecological networks.