A)

Community competence: Host species vary in their contribution to parasite transmission

Ecological filtering: Shifting abiotic conditions alter the composition of host communities

Host

Parasite

Environment

Abiotic constraints: Shifting abiotic conditions alter parasite replication and growth

Trait-competence relationship: Abiotic conditions modify how host species contribute to parasite transmission

B)

a. Abiotic constraints

Environmental gradient

b. Ecological filtering

Host Community Structure

c. Community Competence

Disease

d. Trait-Competence relationship

A)

Host phylogenetic diversity
$R^2 = 0.12$

Host richness
$R^2 = 0.07$

Community pace of life
$R^2 = 0.11$

Elevation

Disease
$R^2 = 0.24$

-0.23

0.16

0.24

n.s.

n.s.

-0.16

-0.66

0.61

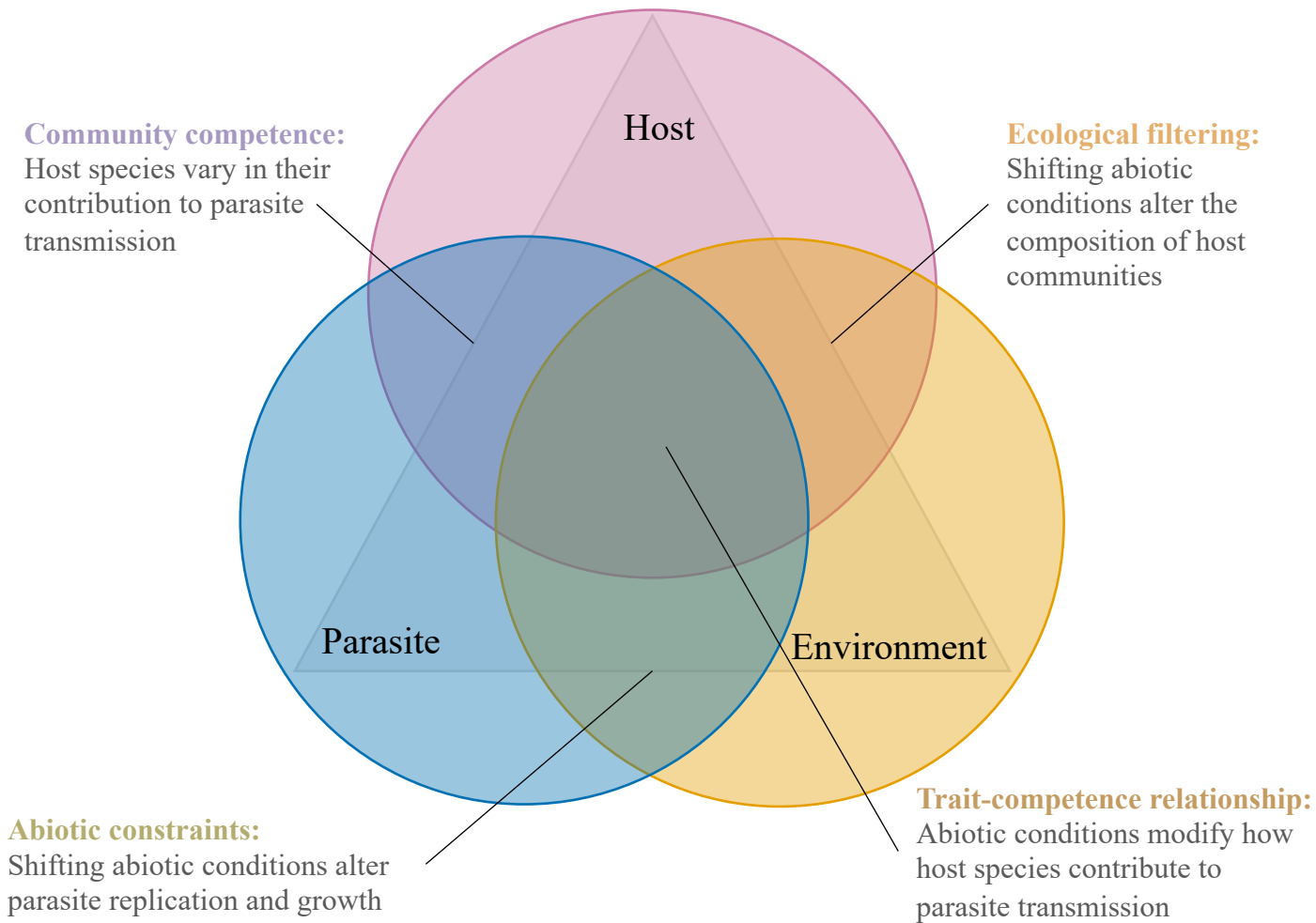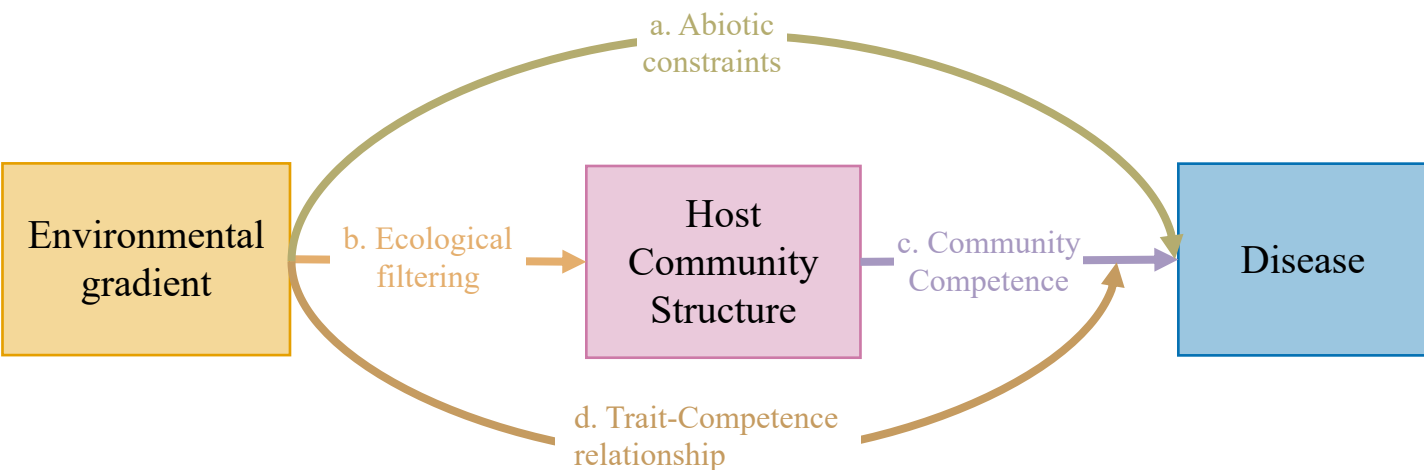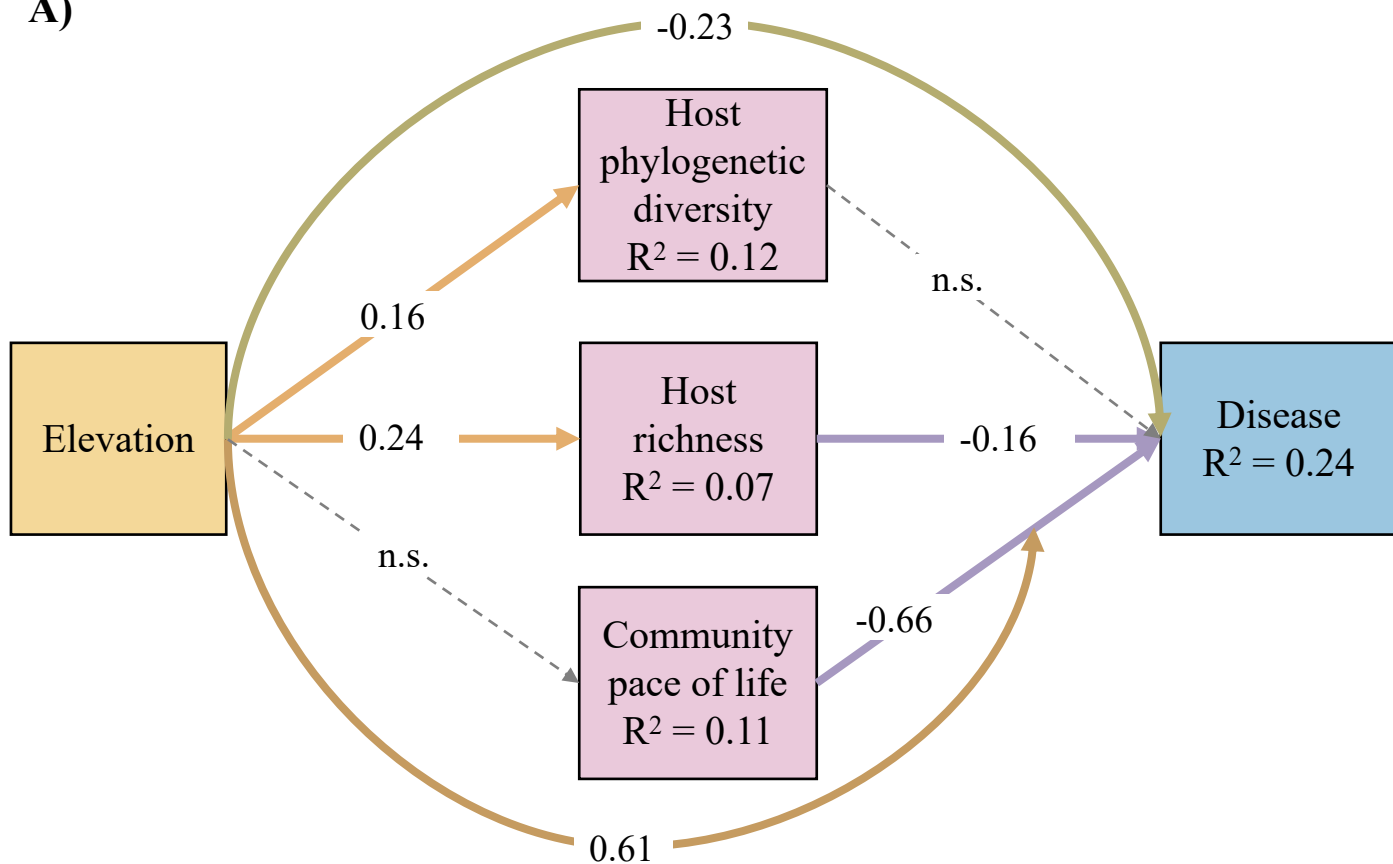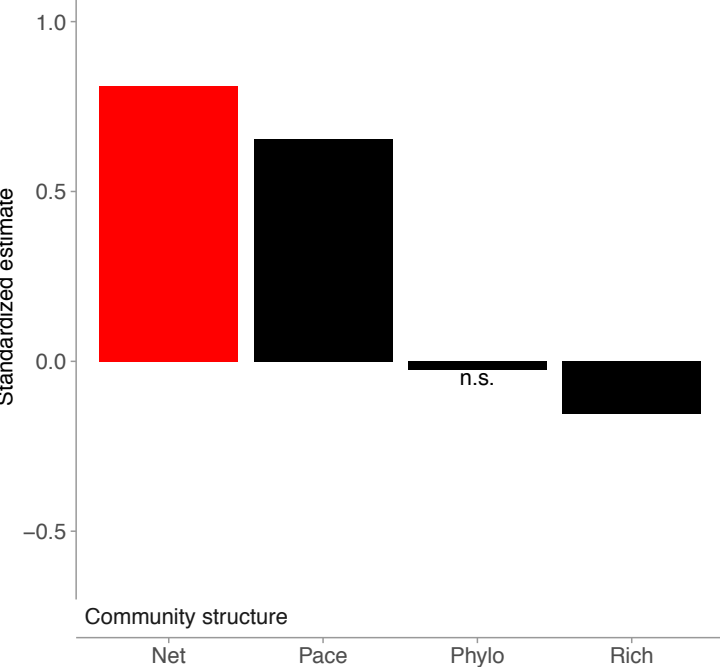**Global goodness-of-fit:** Fisher's C = 1.463; P-value = 0.481; 2 degrees of freedom

B)

Standardized estimate

Community structure

Net   Pace   Phylo   Rich

n.s.

C)

Elevation

Net   Direct   Interactive   Pace   Phylo   Rich

n.s.

n.s.