

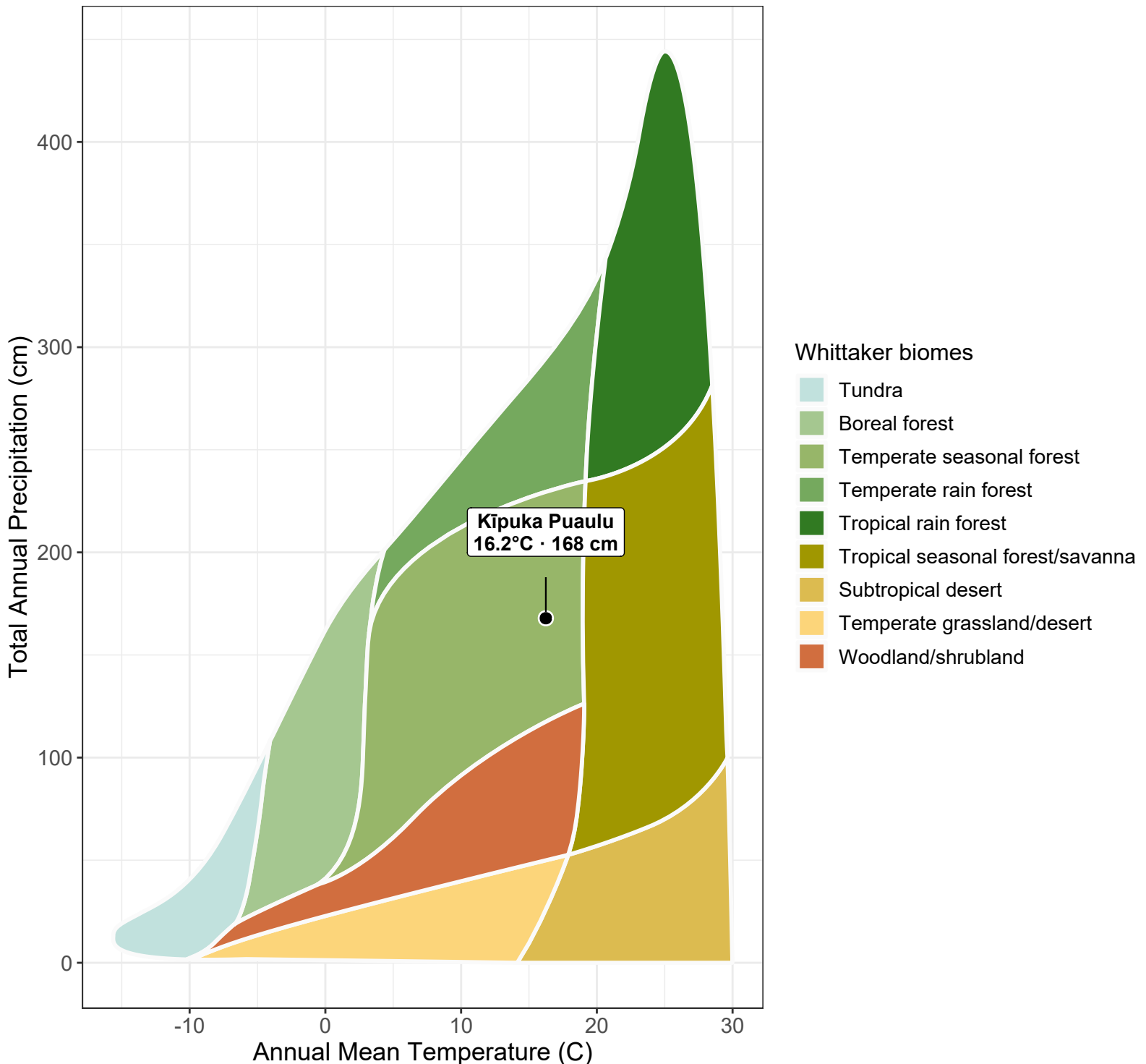
Climate & Site Factors

briefing_book · Report · Kīpuka Puau, HVNP · 19.44095°N 155.30295°W · 1229 m

Why this report. The flora makes sense against its setting — elevation, climate, and substrate. It is also what lets you COMPARE sites: two checklists differ partly because their climates differ. Kīpuka Puau is a mid-elevation, mesic, aseasonal montane forest; its position among the world's biomes is shown below.

Kīpuka Puau on the Whittaker diagram

Climate position among the world's biomes (WorldClim 2.1)



Climate & terrain of the site

temperature	value	precipitation	value
annual mean	16.2 °C	annual total	1679 mm (168 cm)
warmest month (max)	23.0 °C	wettest month	296 mm
coldest month (min)	9.3 °C	driest month	28 mm
annual range	13.7 °C	wettest quarter	673 mm
seasonality (bio4)	134 — very low	seasonality (CV)	62 — moderate

terrain	value
elevation (centre)	1229 m
elevation range, 2 km	1083 – 1508 m
slope	4.4° (gentle)
aspect	134° (SE-facing)

Biome (Whittaker): Temperate seasonal forest — but this is the whittakerr anomaly: a tropical, montane, Aseasonal Hawaiian forest earns a temperate label because the global scheme reads only temperature and precipitation. The very low temperature seasonality (bio4 = 134) is the tell.

Substrate: a kīpuka — an older, weathered forested 'island' ringed by younger, sparsely-vegetated Mauna Loa lava. The older substrate plus the mesic climate is why closed forest persists here while the surrounding young flows are nearly bare.

Climate is WorldClim 2.1 (~1 km) — coarse for Hawaii's steep rainfall gradients; the Hawai'i Rainfall Atlas and Giambelluca et al. maps (~250 m) are finer if you need precision. Elevation from AWS terrain tiles (elevatr).