**Figure S1 –** NMDS plot of wing cardenolides from wild-caught monarchs in the Mariana Islands. Butterflies from Guam (n = 54) and Rota (n = 27) generally had indistinguishable cardenolide profiles, consistent with both populations feeding primary on the numerically dominant host *Asclepias curassavica*. Monarchs from Saipan (n = 2) included one wild-caught individual with a cardenolide fingerprint consistent with developing on *A. curassavica*, as well as one monarch collected on the day of its emergence on an ornamental *Calotropis gigantea* plant (point in lower right).

