Fig. 1 Nectar compounds differ in their effects on maximum microbial density. The Y-axis indicates the scaled effect of treatment on maximum OD (optical density) compared to control nectar. A horizontal line is added at Y = log(2). Values above this line represent an increase in maximum density compared to controls and values lower indicate a decrease in maximum density. White points and bars show the negative binomial model coefficient and 95% confidence intervals for each compound. Colored points indicate individual replicates for each microbe and contain a slight horizontal jitter to aid in readability. Stars represent significant overall treatment impacts at p < 0.05

Fig. 2 Microbial species vary in the scaled impact of treatment on maximum optical density. The Y axis is the scaled impact of a treatment on a microbe’s maximum OD compared to controls, as in Fig 1, but separated to more clearly display variation among species. Microbes are ordered from most frequently (top left) to least frequently isolated from nectar (bottom right). Stars indicate significant treatment impact on maximum OD compared to control (p < .05). See Supplemental Figure 3 for non-scaled data

Fig. 3 Microbial species vary in the scaled impact of treatment on growth rate. The Y axis is the scaled impact of a treatment on a microbe’s growth rate compared to controls, as in Fig 1, but separated to more clearly display variation among species. Microbes are ordered from most frequently (top left) to least frequently isolated from nectar (bottom right). Stars indicate significant treatment impact on maximum OD compared to control (p < .05). See Supplemental Figure 4 for non-scaled data

Fig. 4 Microbial isolation source predicts sensitivity of growth rate but not maximum OD to treatments. The Y-axis indicates the scaled effect of treatment on maximum OD (panel a) and growth rate (panel b) compared to control nectar. A horizontal line is added at Y = log(2). Values above this line represent an increase in maximum density compared to controls and values lower indicate a decrease in maximum density

Fig. 5 Nectar compounds influence microbial community outcomes but differ depending on species considered. The colony forming units (CFUs) per μL of synthetic nectar formed by microbes grown in co-culture and alone across different nectar chemistries. Each panel represents a different pairing of microbes; panel A pairs a facultative nectar yeast with a non-nectar yeast (*Starmerella bombi* & *Zygosaccharomyces bailii*), panel B pairs a nectar specialist yeast with a nectar specialist bacteria (*Metschnikowia reukaufii* & *Rosenbergiella nectarea*), and panel C pairs a non-nectar specialist yeast with a nectar specialist bacteria (*Saccharomyces cerevisiae* & *Rosenbergiella nectarea*). Letters indicate significant pairwise differences between treatments (p < .05) and are shown separately for each microbe

Table 1 The microbes used in the study along with each strain’s source. The prevalence score is an approximation based on the frequency microbes have been discovered in nectar microbe surveys. \* indicates we are not aware of this species being documented as isolated from floral nectar