*Supplemental Material*

Addition material S1 In the present work, fish diets were categorized two different ways to reveal the relationship of diet to rod spectral sensitivity. In addition to the diet categories presented in the main paper (benthic *v.*. pelagic prey), diet was assigned here to address differences in prey appearance found across trophic levels. The diet variable was organized with fishes consuming mostly: (1) planktonic or non-motile prey (*e.g*., larvae, coral, detritus, and algae), (2) crustaceans and other small invertebrates, or (3) cephalopods and fish.

These diet categories were included in a phylogenetically-corrected linear models of rod spectral sensitivity in fishes with all other presented ecological variables. A one-way Welch’s ANOVA was used to compare mean rod *λ*max between the diet categories, as the data did not meet equal variance assumptions. A Games-Howell test (which also do not assume equal variances) was used to examine pairwise differences between categories. Critical *P*-values were adjusted for multiple testing (*n* = 3 pairwise comparisons) using the Bonferroni correction (Dunn, 1961).

Similar to the analyses containing benthic *v*. pelagic diet designations, the results of the linear models presented here identified the best-fit model to contain both depth and habitat as co-predictors. The addition of diet as a co-predictor produced the second-best model, which had the only ΔAIC value < 4. Diet alone did not have significant explanatory power, having a ΔAIC far greater than 4 and an Akaike weight of 0.

Supporting Information Figure S1. Box plots (▬, median; □, 25th and 75th quantiles; T, range; •, outliers) showing rod spectral sensitivity across the ecological variables diet organized according to trophic level. No significant differences were observed (all *P* > 0.05). Numbers listed beneath plot labels are the sample size for that category.