

Matilija Creek, April 29, 2008: Left to right, upper row, above the small squatter's colony upstream of VR15 algal growth was plentiful on the stream, yet, just a short distance above, no algae were growing on or around the ford. The obvious question is why? Both sites have a rocky bottom and plenty of sunlight. Second row, on the left, a sunlight tributary creek above the ford also had no trace of algae, yet the well-shaded main branch further upstream (middle) did have algae. As we went further upstream (right) algae appeared to be associated with higher velocity flows: algae in riffles, no algae in pools (these reaches were all in the Wilderness Area). What possible explanations might there be for these contradictions? My thoughts concerning the "pool-absent, riffle-present" situation as well as the "healthy-green, slack water-decaying" phenomena I mentioned earlier this month, is that nutrient delivery may play a role. Higher velocities mean a greater nutrient flux to select areas in the stream. Slack water habitats may also allow an earlier start to algal growth and/or denser growth – with subsequently earlier self-limitation of nutrient delivery and initiation of decay due to increased density. Questions of how algae get seeded in the first place, i.e., where do they originate from and the conditions that might affect this (length of the previous dry period, upstream conditions, etc.) come to mind as possible explanations for the total absence of growth in sunlit reaches. To my knowledge Cladophora was the only alga seen is these photos.