**USING *Niebla homalea* AS A BIOLOGICAL INDICATOR FOR COASTAL FOG IN CALIFORNIA, USA**

Shelly Benson1\*

1 California Lichen Society, USA; \* E-mail: shelly.benson@yahoo.com

Along the California coast, atmospheric and oceanic forces interact to create a unique habitat known as the coastal fog zone, which is characterized by frequent summer fog. This zone supports high biological diversity. Many species are restricted to the fog zone, including the coast redwood (*Sequoia sempervirens*) and fog lichens (*Niebla* species). They require reliable summer moisture supplied by fog drip. If the frequency or duration of fog diminishes, fog-dependent species will be negatively affected. Unfortunately, current climate models used to predict future coastal fog conditions show a high degree of uncertainty and are not helpful for conservation planning. Therefore, resource managers need a reliable and efficient tool to assess the ecosystem’s response to changes in fog. This pilot study evaluated the use of fog lichens as biological indicators of coastal fog. Lichens are widely used as biological indicators because they are often among the most sensitive organisms in an ecosystem. Of the ten saxicolous *Niebla* species that occur in California, *N. homalea* was the most frequent and exhibited the largest range, from Mendocino County in northern California to the state’s southern border with Mexico. Distribution of *N. homalea* followed the path of fog as it flows inland through low points in the topography. Occurrences coincided with areas that received more than four hours per day of summer fog. Abundance of *N. homalea* was positively correlated with hours per day of summer fog. These initial findings suggest that *N. homalea* responds to changes in fog and would be a good biological indicator.