**SCIENTIFIC TELEPHONE: HOW AN ESTIMATE OF LICHEN ECOSYSTEM DOMINANCE BECAME “FACT”**

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Proper citation of peer-reviewed research is one of the pillars of scientific knowledge and progress. When there is a breakdown in this process, the result is at best confusion, and at worst misinformation leading to action or lack thereof, causing harm. Here we present an example of “scientific telephone”, where a commonly cited statistic about lichen ecosystem dominance (an estimation that 8% of the world’s terrestrial surface is dominated by lichens) has become misconstrued and misused through time. We traced the original source of the statistic back to two papers published in 1987 and 1995, neither of which were peer-reviewed. We then tracked all citations of those papers in peer-reviewed literature for the statistic (63 papers in total), some of which later became a citation source instead of the original articles. We identified at least a dozen instances of the statistic’s use in popular science media. We found that citations for this statistic have slowly increased through time, and there was a notable increase upon its inclusion in a popular lichen biology textbook. We also found that the intent of the stated statistic has changed, with earlier works hedging the number as an estimate and later works stating it with more certainty. Most alarmingly, we have found several instances of the 8% statistic itself being altered, with 6-10% being reported, despite citation of the original source. This is significant because lichen terrestrial dominance is a commonly used statistic to garner the public’s interest in lichen biology, and because global lichen ecosystem dominance remains unknown. Importantly, this case serves as an example of the power of misinformation even through the peer review process. We are now combining remote sensing, ground surveys, and modelling to generate an empirical estimate of global lichen coverage.