Self-thinning and size inequality dynamics in a clonal seaweed (Sargassum lapazeanum, Phaeophyceae) (44:45–9).

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The abstract of this article contained an error in the second sentence when originally printed. The correct abstract is as follows.

ABSTRACT

Fronds of clonal seaweeds with extensive holdfasts relative to frond size are known not to self-thin during growth, even in crowded stands. We tested whether frond self-thinning would occur for a clonal seaweed with large fronds relative to holdfast size, as such traits are more similar to those of unitary seaweeds, which do self-thin in crowded conditions. We used Sargassum lapazeanum Setch. et N. L. Gardner (Fucales, Phaeophyceae) from the Pacific coast of Mexico, for which we first confirmed its clonal nature by performing a regeneration experiment in culture tanks. During the growth season (winter to late spring), S. lapazeanum stand biomass increased, while frond density and size inequality (Gini coefficient for frond biomass) decreased. These results indicate that self-thinning occurred at the frond level. We propose a conceptual model for frond dynamics for clonal seaweeds in general. In stands of clonal species with small fronds and relatively extensive holdfasts (particularly when holdfasts are perennial), frond dynamics would be determined mostly by intraclonal regulation, which seems to prevent excessive crowding from occurring. Such species display a positive biomass–density relationship during the growth season. On the contrary, in stands of clonal species with large fronds relative to holdfast size, frond dynamics would be determined mostly by interactions among genets. For such species, self-thinning may be detected at the frond level in crowded stands, resulting in a negative biomass–density relationship during growth.