**Table 1.** Summary of morphological and physiological changes in cyanobacteria symbiotically associated with hornworts and the liverwort Blasia

The table was compiled from the following references: Steinberg and Meeks (1989), Meeks (1990), Rai (1990), and Bergman *et al.* (1992). n.d.=not determined, although values are likely to be similar to hornwort data.

|  | Hornworts      | Liverworts (Blasia) |
|--|----------------|---------------------|
| Plant structure infected                 | Slime cavities | Auricles            |
| Cyanobiont                               | Nostoc         | Nostoc              |
| Location of cyanobiont                   | Intercellular  | Intercellular       |
| Heterocyst frequency <sup>a</sup>        | 30-50%         | 30-50%              |
| Nitrogenase specific activity            | 23.5           | n.d.                |
| Glutamine synthetase:                    |                |                     |
| Amount of protein <sup>b</sup>           | ~86%           | n.d.                |
| Specific activity <sup>b</sup>           | ~38%           | n.d.                |
| Form of combined N released              | $NH_4^+$       | $NH_4^+$            |
| Light-dependent CO <sub>2</sub> fixation | 12%            | n.d.                |
| Rubisco:                                 |                |                     |
| Amount of protein <sup>c</sup>           | 100%           | n.d.                |
| Specific activity <sup>c</sup>           | 12%            | n.d.                |

<sup>&</sup>lt;sup>a</sup> Heterocyst frequencies are expressed as a percentage of total cells. Values for free-living cyanobacteria are typically 4–10%.

<sup>&</sup>lt;sup>b</sup> Values are for the symbiont as a percentage of the same cyanobacterium in the free-living state.

<sup>&</sup>lt;sup>c</sup> Values are expressed as a percentage of those for the same free-living cyanobacterium.