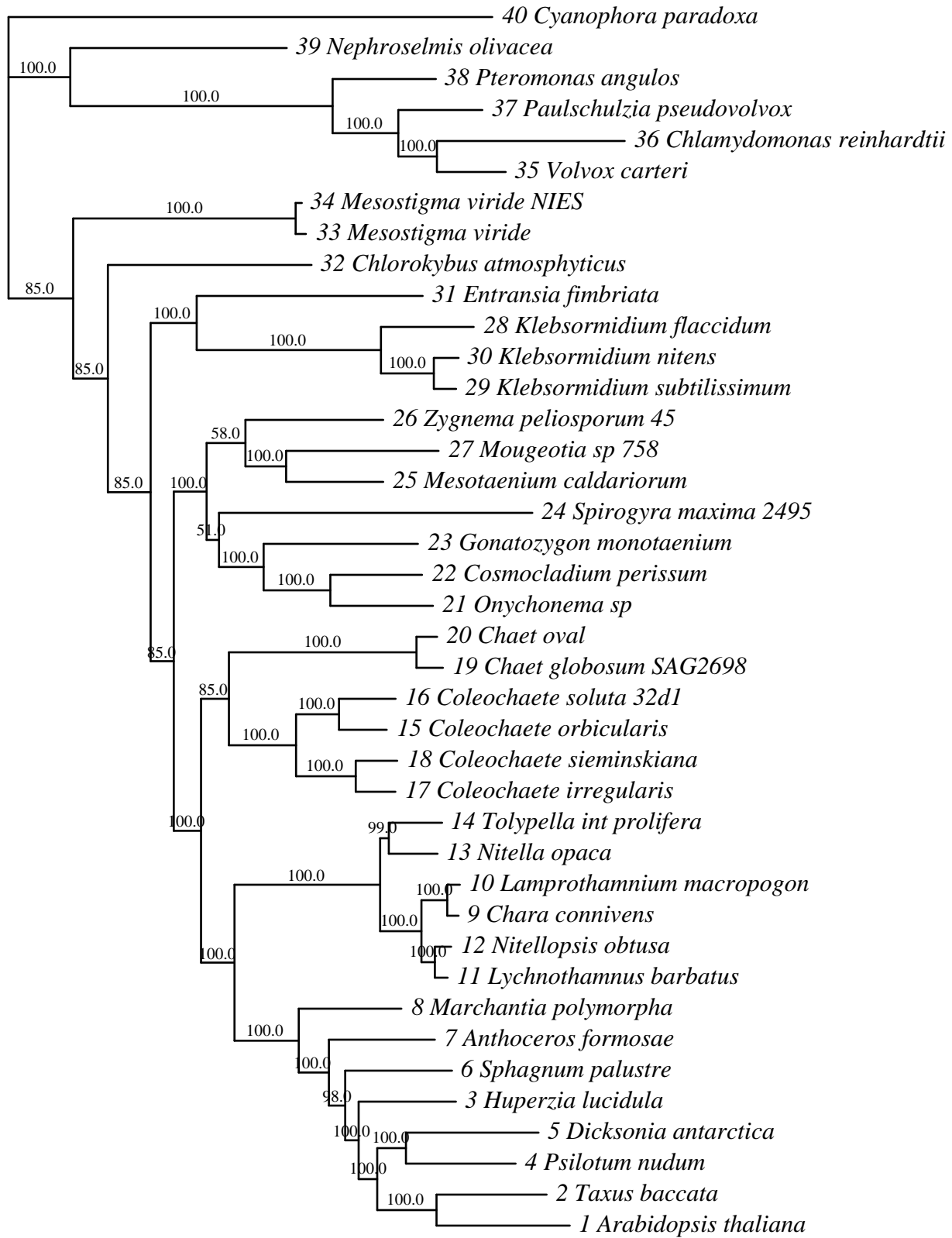
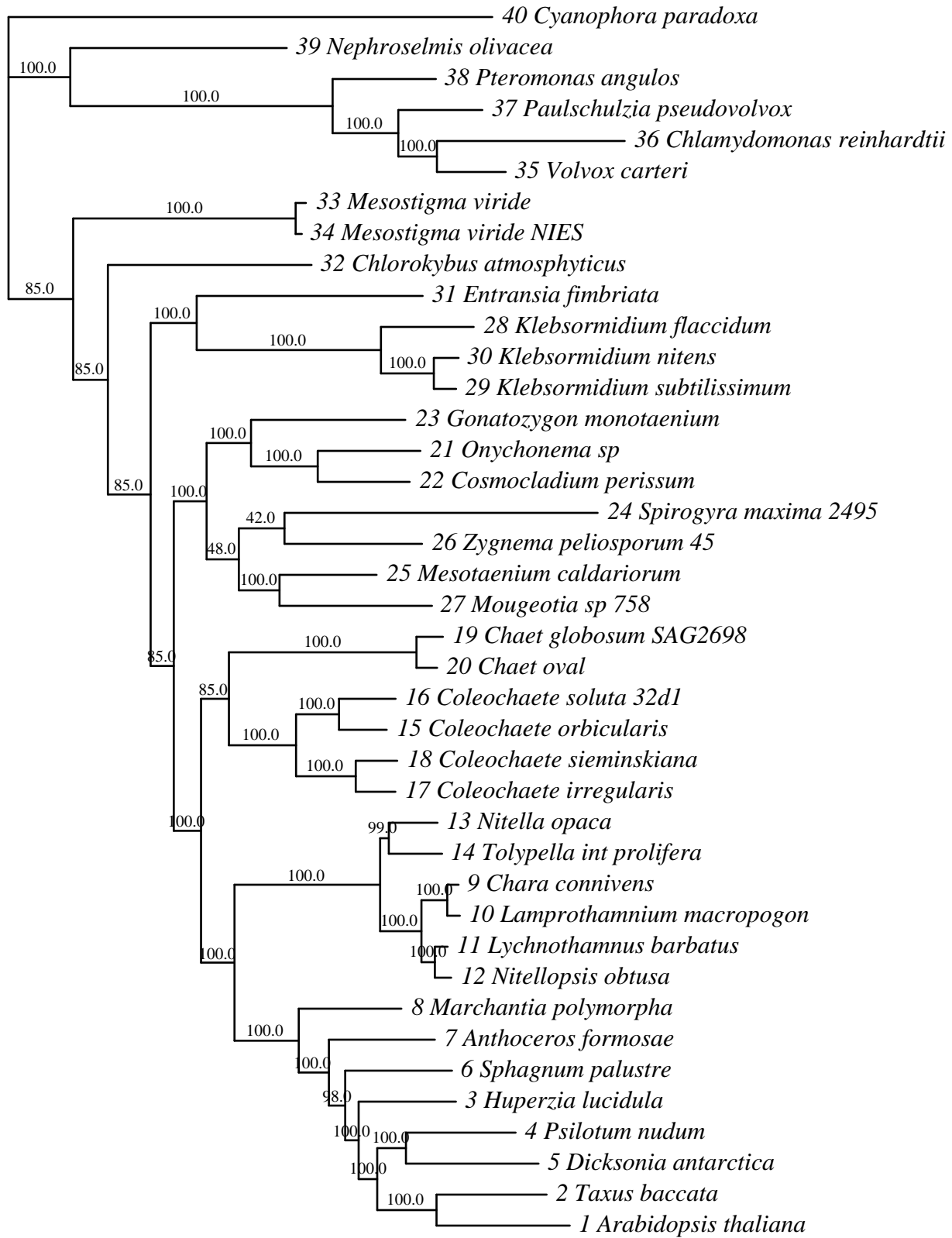


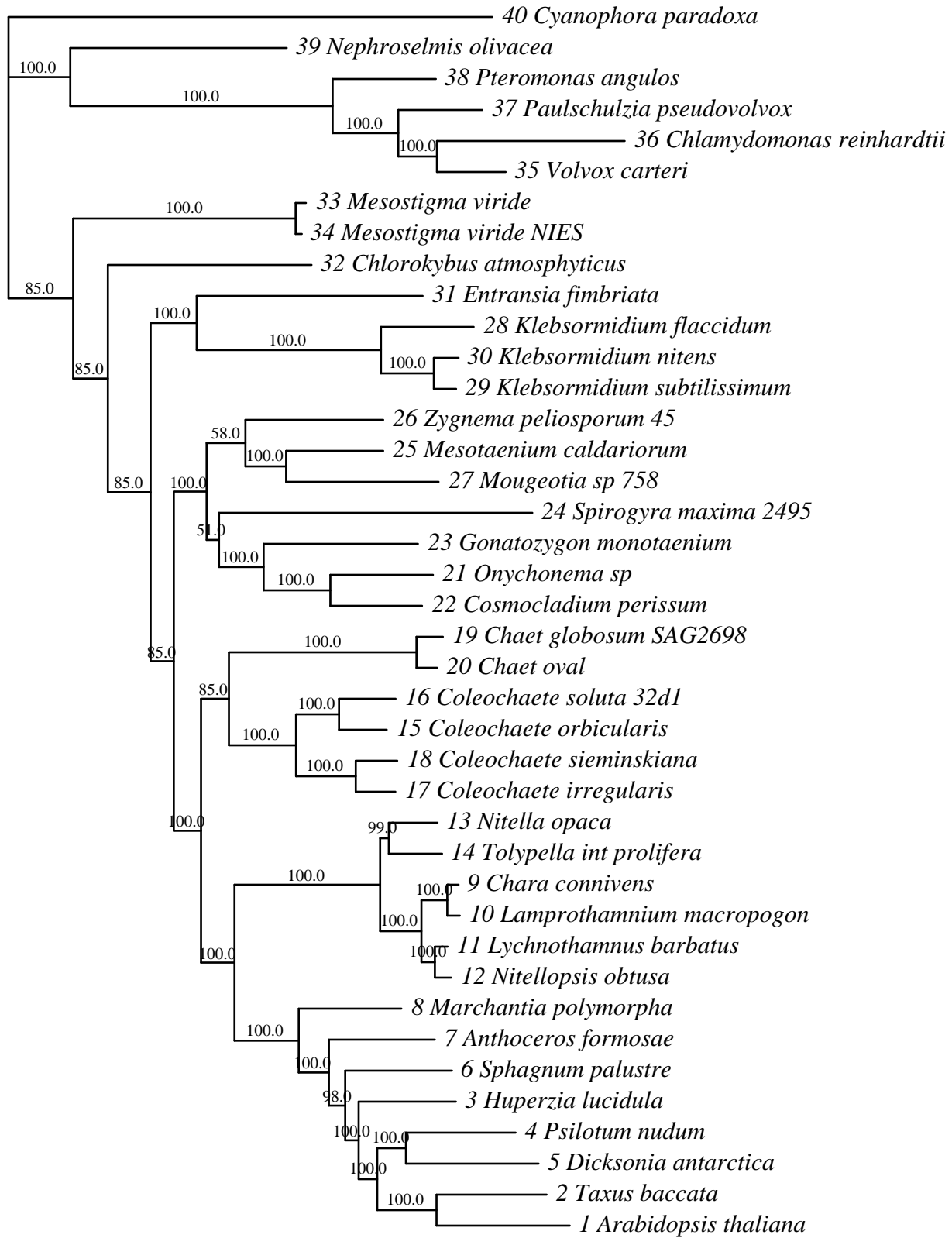
Majority-rule Consensus



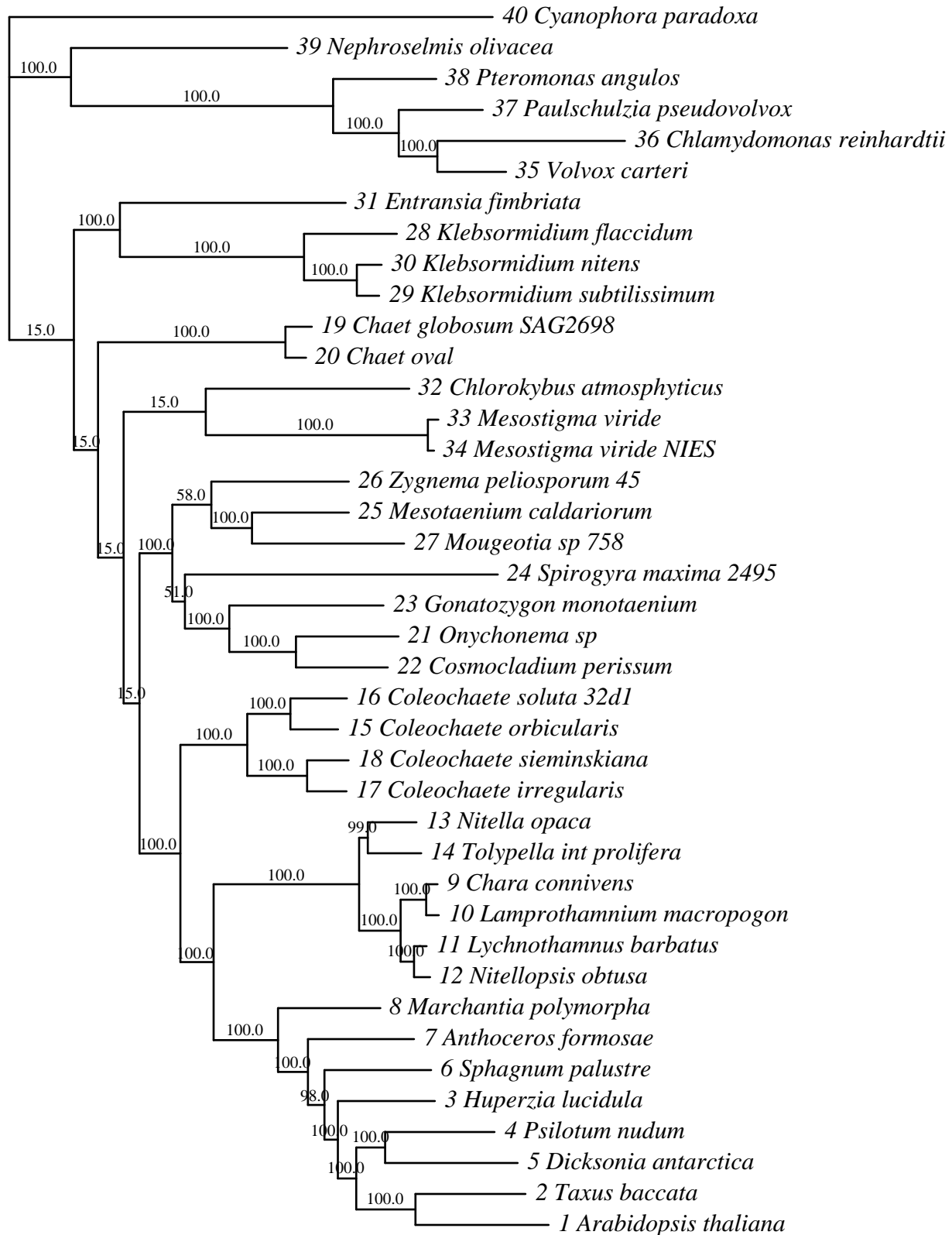
Frequency 40 of 100



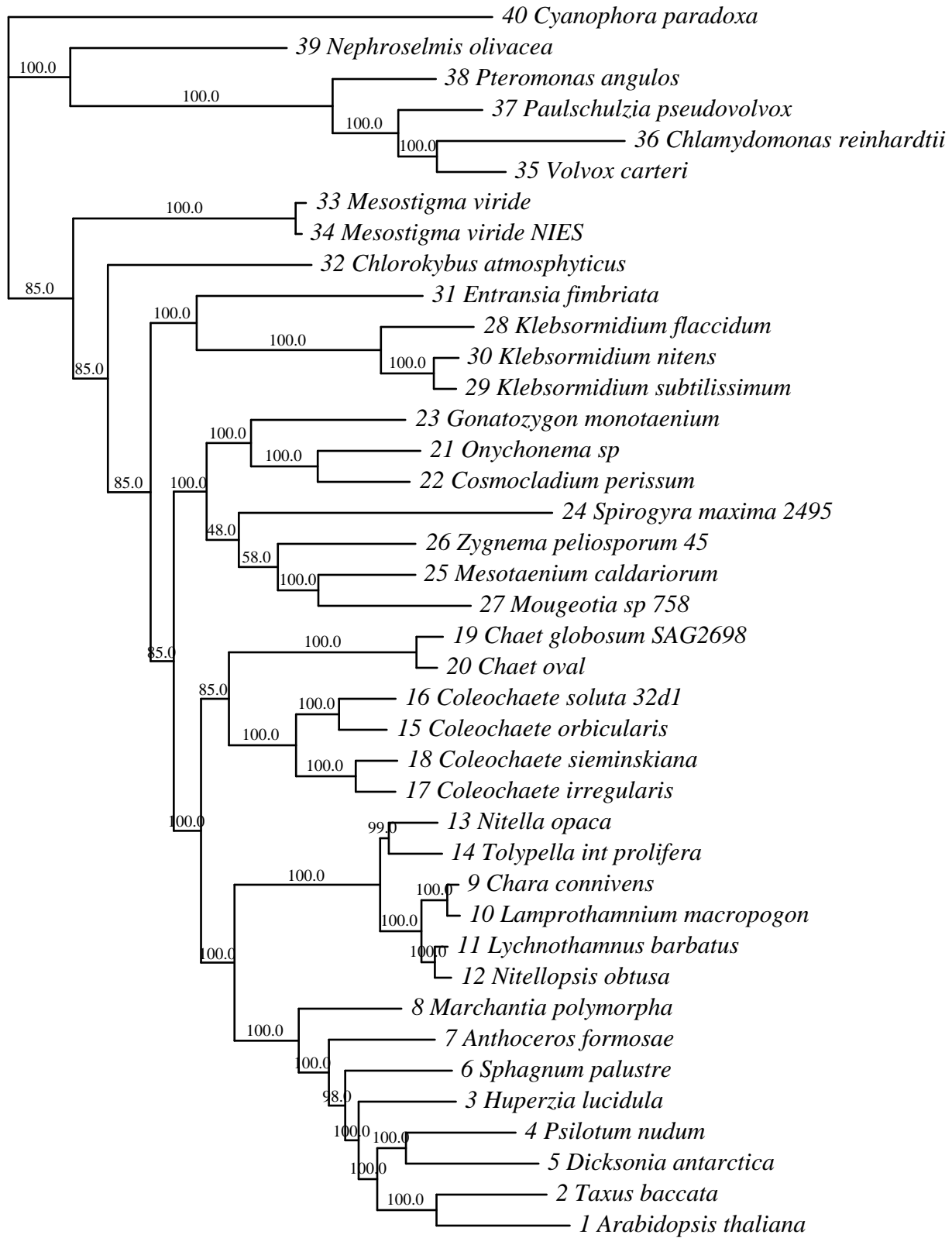
Frequency 37 of 100



Frequency 13 of 100



Frequency 5 of 100



Phylogenetic tree showing relationships between 40 species, with bootstrap values indicated at the nodes. The tree is rooted at the bottom with *Arabidopsis thaliana* (1) and branches upwards. The species names are listed on the right side of the tree, with their corresponding numbers in parentheses.

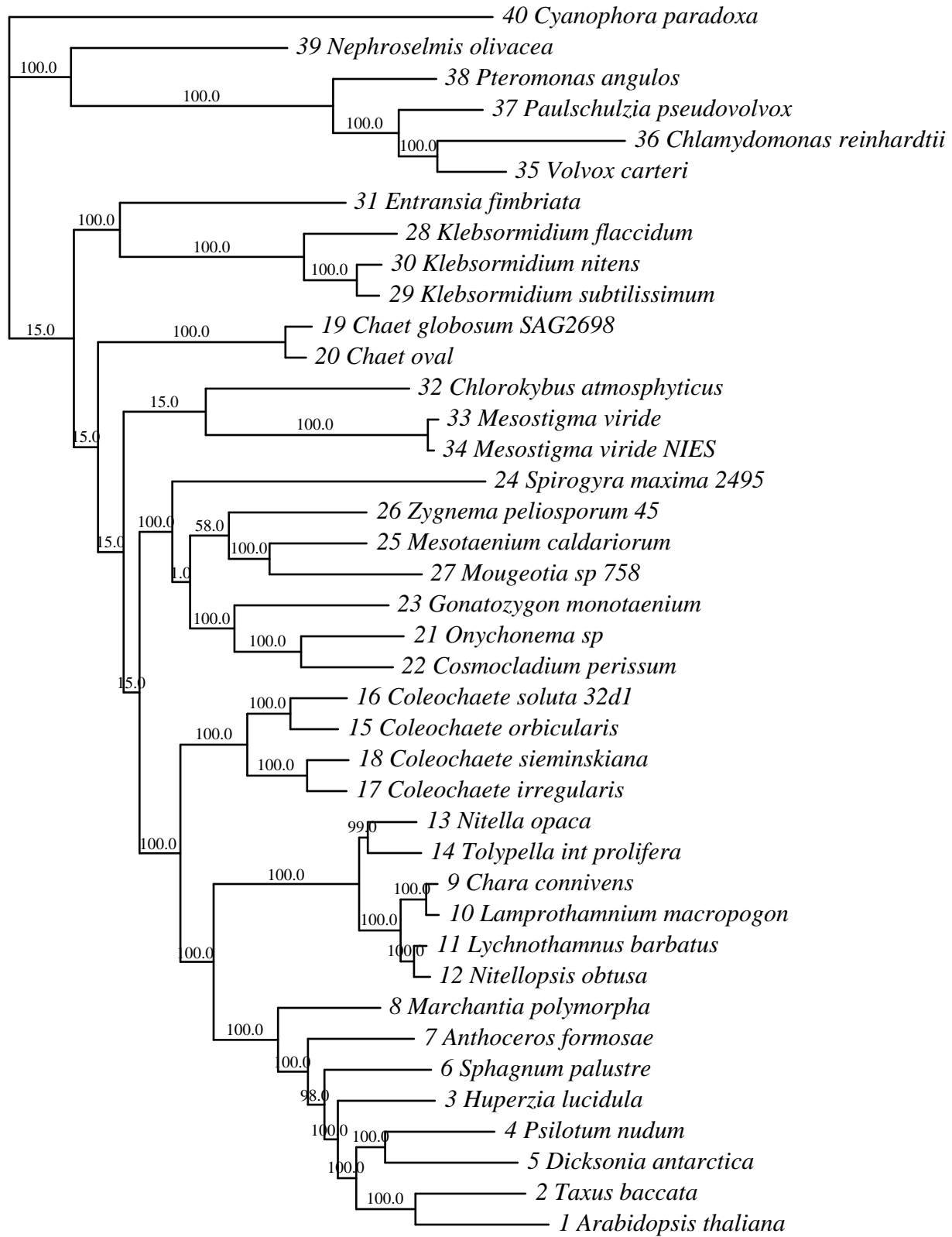
- 40 *Cyanophora paradoxa*
- 39 *Nephroselmis olivacea*
- 38 *Pteromonas angulos*
- 37 *Paulschulzia pseudovolvox*
- 36 *Chlamydomonas reinhardtii*
- 35 *Volvox carteri*
- 33 *Mesostigma viride*
- 34 *Mesostigma viride* NIES
- 32 *Chlorokybus atmosphyticus*
- 31 *Entransia fimbriata*
- 28 *Klebsormidium flaccidum*
- 30 *Klebsormidium nitens*
- 29 *Klebsormidium subtilissimum*
- 23 *Gonatozygon monotaenium*
- 21 *Onychonema* sp
- 22 *Cosmocladium perissum*
- 24 *Spirogyra maxima* 2495
- 26 *Zygnema peliosporum* 45
- 25 *Mesotaenium caldariorum*
- 27 *Mougeotia* sp 758
- 19 *Chaet globosum* SAG2698
- 20 *Chaet oval*
- 16 *Coleochaete soluta* 32d1
- 15 *Coleochaete orbicularis*
- 18 *Coleochaete sieminskiana*
- 17 *Coleochaete irregularis*
- 13 *Nitella opaca*
- 14 *Tolypella int prolifera*
- 9 *Chara connivens*
- 10 *Lamprothamnium macropogon*
- 11 *Lychnothamnus barbatus*
- 12 *Nitellopsis obtusa*
- 8 *Marchantia polymorpha*
- 7 *Anthoceros formosae*
- 3 *Huperzia lucidula*
- 6 *Sphagnum palustre*
- 4 *Psilotum nudum*
- 5 *Dicksonia antarctica*
- 2 *Taxus baccata*
- 1 *Arabidopsis thaliana*

Phylogenetic tree showing relationships between 40 species, with bootstrap values at nodes. The tree is rooted at the bottom with *Arabidopsis thaliana* (1) and branches upwards. The species names are listed on the right, and the bootstrap values are indicated at the nodes. The tree shows a clear separation between the green algae (top) and the land plants (bottom), with a high bootstrap value of 100.0 at the base of the land plant clade.

Species and their corresponding numbers in the tree:

- 40 *Cyanophora paradoxa*
- 39 *Nephroselmis olivacea*
- 38 *Pteromonas angulos*
- 37 *Paulschulzia pseudovolvox*
- 36 *Chlamydomonas reinhardtii*
- 35 *Volvox carteri*
- 33 *Mesostigma viride*
- 34 *Mesostigma viride* NIES
- 32 *Chlorokybus atmosphyticus*
- 31 *Entransia fimbriata*
- 28 *Klebsormidium flaccidum*
- 30 *Klebsormidium nitens*
- 29 *Klebsormidium subtilissimum*
- 26 *Zygnema peliosporum* 45
- 25 *Mesotaenium caldariorum*
- 27 *Mougeotia* sp 758
- 24 *Spirogyra maxima* 2495
- 23 *Gonatozygon monotaenium*
- 21 *Onychonema* sp
- 22 *Cosmocladium perissum*
- 19 *Chaet globosum* SAG2698
- 20 *Chaet oval*
- 16 *Coleochaete soluta* 32d1
- 15 *Coleochaete orbicularis*
- 18 *Coleochaete sieminskiana*
- 17 *Coleochaete irregularis*
- 14 *Tolypella int prolifera*
- 13 *Nitella opaca*
- 9 *Chara connivens*
- 10 *Lamprothamnium macropogon*
- 11 *Lychnothamnus barbatus*
- 12 *Nitellopsis obtusa*
- 8 *Marchantia polymorpha*
- 7 *Anthoceros formosae*
- 6 *Sphagnum palustre*
- 3 *Huperzia lucidula*
- 4 *Psilotum nudum*
- 5 *Dicksonia antarctica*
- 2 *Taxus baccata*
- 1 *Arabidopsis thaliana*

Frequency 1 of 100



Phylogenetic tree showing relationships between 39 bryophyte species and *Arabidopsis thaliana*. The tree is rooted at *Arabidopsis thaliana* (1) and branches out to show the evolutionary relationships between the bryophytes. Bootstrap values are provided for many of the internal nodes, indicating the confidence in the branching order. The species are numbered 1 through 39, corresponding to the list provided in the caption.

Species list (from top to bottom):

- Arabidopsis thaliana*
- Taxus baccata*
- Huperzia lucidula*
- Psilotum nudum*
- Dicksonia antarctica*
- Sphagnum palustre*
- Anthoceros formosae*
- Marchantia polymorpha*
- Nitellopsis obtusa*
- Lychnothamnus barbatus*
- Lamprothamnium macropogon*
- Chara connivens*
- Tolypella int prolifera*
- Nitella opaca*
- Coleochaete irregularis*
- Coleochaete sieminskiana*
- Coleochaete orbicularis*
- Coleochaete soluta* 32dl
- Mougeotia sp* 758
- Mesotaenium caldariorum*
- Zygnema peliosporum* 45
- Spirogyra maxima* 2495
- Cosmocladium perissum*
- Onychonema sp*
- Gonatozygon monotaenium*
- Mesostigma viride*
- Mesostigma viride* NIES
- Chlorokybus atmosphyticus*
- Chaet oval*
- Chaet globosum* SAG2698
- Klebsormidium subtilissimum*
- Klebsormidium nitens*
- Klebsormidium flaccidum*
- Entransia fimbriata*
- Volvox carteri*
- Chlamydomonas reinhardtii*
- Paulschulzia pseudovolvox*
- Pteromonas angulos*
- Nephroselmis olivacea*
- Cyanophora paradoxa*

0.1