

1. Primary stems rhizomatous with abundant rhizoids; outer surface of the exostome teeth regularly thickened, more or less papillose; endostome not adhering to the exostome, basal membrane and cilia present..... 2

1. Primary stems with a few rhizoids; outer surface of exostome teeth often irregularly thickened, smooth; endostome variable, often adhering to the exostome, basal membrane and cilia often absent 5

2. Secondary stems often simple, usually loosely and irregularly branched; costae double, short and weak
..... 3.

Garovaglia

2. Secondary stems frondose, often complanately branched in upper parts of stems; costae single or forked
..... 3

3. Leaf costae short, single (less than 1/4 the leaf length) or double; capsules cylindrical..... 13.

Trachyloma

3. Leaf costae long, single (more than 3/4 the leaf length); capsules ovoid to spherical 4

4. Pseudoparaphyllia absent; leaves narrowly ovate; median and upper leaf cells unipapillose 6. *Osterwaldiella*

4. Pseudoparaphyllia present; leaves cordate; leaf cells smooth..... 7.

Penzigiella

5. Leaf costae absent or short, double 6

5. Leaf costae single 9

6. Leaves auriculate at the base; alar and basal cells not differentiated..... 5.

Meteoriella

6. Leaves without auricles at the base; alar and basal cells differentiated 7

7. Leaves gradually becoming shortly acuminate at the apex..... 11.

Pterobryopsis

7. Leaves abruptly constricted into a slender apex 8

8. Stems not differentiated into frond and stipe; leaves serrulate at the apex; setae 6–8 mm long.....

2. *Eumyurium*

8. Stems differentiated into frond and stipe; leaves usually entire or only denticulate near the apex; setae 2–3 mm long..... 12.

Symphysodontella

9. Leaves cordate and auriculate at the base..... 1.

Calyptothecium

9. Leaves not cordate and not auriculate at the base
 10
10. Leaves not or only slightly concave; alar cells not or only slightly differentiated..... 11
10. Leaves distinctly to strongly concave; alar cells clearly differentiated.....
 12
11. Leaves ovate-lingulate, acute to obtuse at the apex; endostome filiform..... 4.
- Hydrocryphaea*
11. Leaves ovate-lanceolate, long-acuminate at the apex; endostome reduced, adhering to the exostome

 10.
- Pterobryon*
12. Leaves ovate-lanceolate, slenderly long-acuminate at the apex..... 12.
- Symphysodontella*
12. Leaves oblong-oval, blunt or shortly apiculate at the apex
 13
13. Leaf costae subpercurrent to shortly excurrent; capsules exserted..... 8.
- Pirella*
13. Leaf costae extending to the mid-leaf or somewhat beyond; capsules immersed
 9. *Pseudopterobryum*