## Sub-Guide to "Simple" Thalloid Liverworts

Revised through 21 December 2009

Group S1 – Thallus with a distinct mid-rib & unistratose wings	
	Group S1
Thalli with <b>hairs</b> on <b>both</b> surfaces <b>and</b> margins; midrib <b>lacking</b> central strand; gametangia on <b>ventral</b> branches; NW, AP	Apometzgeria
Thalli small (1-4 mm wide) with <b>hairs</b> on margins <b>only</b> ; midrib <b>lacking</b> central strand; gametangia on <b>ventral</b> branches; WS	Metzgeria
Thalli larger (3-6 mm wide) <b>lacking</b> hairs; midrib with central <b>strand</b> ; gametangia on <b>dorsal</b> surface of midrib; WS	Pallavicinia

## Group S2 – Thallus with indistinct midrib & gradually thinning wings

	Group S2
Thalli <b>subterranean, colorless or white</b> ; parasitic on a basidiomycetous endophyte; only only mature capsules visible above the surface; GL	Cryptothallus
Thalli <b>terrestrial &amp; green</b> . Thalli <b>freely branched;</b> rhizoids few or absent; WS	Riccardia
Thalli mostly <b>unbranched</b> .	Riccurulu
Thalli with <b>thick midrib</b> area, <u>+</u> red tinged in sunlight; WS	Pellia
Thalli <b>lacking</b> a distinctive midrib area, but with a distinctive <b>greasy</b> luster & feel; WS	Aneura
Group S3 – Thallus with scalloped or wavy, irregular margins	Group S3
Thallus margins <b><u>+</u>regularly</b> lobed; flask-like <b>gemmae bottles</b> & <i>Nostoc</i> <b>colonies</b> common; WS	Blasia
Thallus margins <b>irregularly</b> lobed; <b>lacking</b> gemmae bottles & <i>Nostoc</i> colonies. Thallus midrib <b>lighter colored</b> ; male thalli with scattered <b>scales</b> on <b>both</b> surfaces; sporangia <b>spherical</b> ; NW Thallus midrib <b>not</b> lighter colored; male thalli with <b>scales</b> mainly on midline <b>dorsal</b> surface;	Calycularia Moerckia
sporangia <b>cylindric</b> ; N	
Group S4 – Thallus narrow with leaf-like lobes	
	Group S4
Thalli <b>erect &amp; fleshy</b> from a creeping, <b>rhizome-like</b> base; lobes <u>+</u> isophyllous; NW, ME, NH	Haplomitrium
Thalli with leaf-like scales on the dorsal surface; white oil bodies visible at 10x; NW	Apotreubia
Thalli with involucres on the dorsal surface & apical tubers; rhizoids colorless; CA	Geothallus
Thalli lacking any of the above unique characters; rhizoids usually purplish; WS	Fossombronia